

British Birds



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British Birds

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Britain's first Olive-backed Pipit

Identification of Isabelline Wheatear and four warblers

Dartford Warblers in England

Ross's Gulls in Alaska

Personalities: O. J. Merne · Mystery photograph

Notes · Review · Letters · Usual news features

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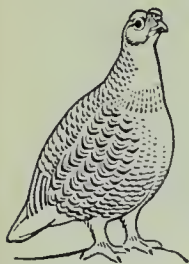
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British Birds

VOLUME 72 NUMBER 1 JANUARY 1979



Editorial

D. I. M. Wallace, who joined the editorial board of *British Birds* in January 1972, has now resigned. His reasons will be understood by us all: pressure of work has forced him to give up either serving on ornithological committees, or his ornithological writing, or his ornithology. As one of our leading fieldmen, loss of the last of these would be unthinkable; and as one of our most prolific authors of identification papers, it is good news that the second will continue. Ian Wallace will, indeed, remain closely associated with *BB* in his dual role of author and artist. Some of Ian's achievements were listed when he retired from the chairmanship of the Rarities Committee (*Brit. Birds* 69: 414-415). He has also just agreed to submit himself to public exposure in a 'Personalities' profile which is in preparation. Now, therefore, we merely express our warmest thanks to him for all his work for *BB* during his seven years on the board.

Choosing a successor is obviously never easy, but we are fortunate in Britain to have an abundance of ornithological talent. Literally the number one 'Personality' (*Brit. Birds* 70: 32-33), and Ian Wallace's successor in 1976 as chairman of the Rarities Committee (69: 415), Peter J. Grant has accepted the invitation to fill the vacant place on the editorial board. As joint author of *The Thames Transformed* (1976), habitué of Dungeness Bird Observatory, regular visitor every autumn to the Isles of Scilly and author of many identification papers, including, now, a major series on gull identification (Part I, *Brit. Birds* 71: 145-176), Peter will be known by name to most readers and personally to many. We welcome him to the editorial team.

British Birds has been doing rather well lately. Circulation has increased by 68% in the past 2½ years (which is good news for us all, since it allows us to have more pages and more photographs and helps to keep the price down). Much of this increase has been due to promotional work by the staff of Macmillan Journals Ltd, headed by its publishing manager, Dr Roger Woodham. The editorial board has had most cordial relations with Dr Woodham, so it is with great regret that we report that he has now moved on to another post within Macmillan. His successor is Dr Stuart Sharrock; no nepotism is involved for, so far as they are aware, Stuart and Tim share surnames but not ancestors.

Britain's first Olive-backed Pipit

Peter Conder

**Ancient history . . .
detective work . . .
happy ending**



On 14th April 1948, Joan Keighley (now Mrs Joan Jenkins) and I caught a pipit *Anthus* in the Garden Trap on Skokholm, Dyfed. It was clearly none of the species known to us and, even after consulting *The Handbook*, we could not identify it. We recorded details in the bird observatory's log (now no longer available), which JK summarised in her diary as follows:

Wind N3. 12.30 BST. Pipit caught in Garden Trap. Back greyish olive green. Head dark markings. Breast almost white with dark markings. White eyestripe.	Whitish outer tail feathers. Pink legs. Short hind claw. Losing its feathers badly. Weight 23.5 g. Wing 87.5 mm. Bill 12.0 mm. Tarsus 22.0 mm.
---	--

I photographed the bird (plate 1), which stayed on the island until at least 18th April; it was extremely exhausted and on 16th I almost caught it by hand.

At the end of the season, I visited the British Museum (Natural History) and examined pipit skins. I decided that the bird had almost certainly been an Olive-backed Pipit *A. hodgsoni*, but hesitated to submit such an unusual record: not only a first for Britain and Ireland, but of a little-known species and at what seemed an extraordinary time of year for an Asiatic vagrant.

When thoroughly documented records of Olive-backed Pipits on Fair Isle, Shetland, in October 1964 and September 1965 were published in 1967 (*Brit. Birds* 60: 161-166) and I saw the accompanying photographs (60: plate 20), I became certain that my Skokholm pipit was the same species. I sent the photograph and notes to I. J. Ferguson-Lees, who was then executive editor of *British Birds*, and the Rarities Committee was consulted. Its view was: 'Probably, but not sufficient evidence'.

Ten years later, in April 1977, Dr J. T. R. Sharrock was sorting through the *British Birds* files when he came upon the photograph, which he recognised as showing an Olive-backed Pipit. The only writing on the back, however, stated merely 'Skokholm pipit'. Knowing nothing of the previous history, but aware that no Olive-backed Pipit had ever been recorded on Skokholm, he wrote to Dr Christopher M. Perrins, who was likewise unaware of any such occurrence, and who commented that it must relate to a period before he was associated with Skokholm. At CMP's suggestion, therefore, JTRS wrote to me, and thus successfully



1. Olive-backed Pipit *Anthus hodgsoni*, Dyfed, April 1948 (*Peter Conder*)
2. Olive-backed Pipit *Anthus hodgsoni*, Shetland, September 1965 (*R. H. Dennis*)



tracked down the photograph's source. In the meantime, I had seen Olive-backed Pipits in India and no doubts remained in my mind; it was with enthusiasm, therefore, that I complied with JTRS's suggestion to resubmit the record, this time to the BOU Records Committee (the Rarities Committee now considers only those records since 1958; the BOURC considers all British 'firsts'). With a background of detailed notes on nine British records during 1964-76, and advice from Alan Kitson who has recently studied the species in Mongolia, assessment is far easier now than it was in 1967 when I first submitted the record (and incomparably easier than in 1948): the BOURC unhesitatingly accepted 'the Skokholm pipit' as an Olive-backed, which, thus, became the first for Britain and Ireland.

The main diagnostic characters shown by the 1948 photograph (plate 1) are, to quote Alan Kitson (*in litt.*), the 'short, startling supercilium, bordered above with black; the black ear-spot; and black breast-spotting'. The similarity to the 1965 Fair Isle bird (plate 2) is such that they could almost have been the same individual; the photograph of the 1976 Fair Isle example (70: plate 117) showed the same features.

The month of the Skokholm occurrence does not seem so strange now as it did in 1948; there has, for example, been a British record of Dusky Warbler *Phylloscopus fuscatus* in May (*Brit. Birds* 64: 361), and one of the other nine British Olive-backed Pipits was also in spring, at Portland Bill, Dorset, in May 1970 (*Brit. Birds* 64: 364).

Acknowledgements

I am most grateful to Mrs Joan Jenkins, who on two separate occasions had to ferret through her notes to find data; and to Tim Sharrock for his enthusiastic help in pursuing this identification and record to a successful conclusion.

Summary

After 30 years, an Olive-backed Pipit *Anthus hodgsoni* trapped on Skokholm, Dyfed, on 14th April 1948 (and seen again on 16th and 18th April) has gained official recognition as the first record of the species in Britain and Ireland.

Peter Conder, 12 Swaynes Lane, Comberton, Cambridge CB3 7EF

Fifty years ago . . .

'RED-BREASTED FLYCATCHER IN NORTHUMBERLAND When I was walking with my gun along the shore near Boulmer, Northumberland, on October 1st, 1928, my attention was attracted by a small bird, which was unknown to me . . . I shot it . . . I sent it to the Curator of the Hancock Museum, Newcastle-on-Tyne, who kindly identified it for me.' (*Brit. Birds* 22: 189-190, January 1929)

Identification of Isabelline Wheatear, Desert Warbler and three *Phylloscopus* warblers

Alan R. Kitson

1, 3, 0, 112 & 0:
the British and Irish
records totals of each
of these five mainly
Asiatic species



The background to my observations in Mongolia was detailed earlier (Kitson 1978). This paper covers five more species which have occurred or might occur as vagrants to western Europe.

Isabelline Wheatear *Oenanthe isabellina*

From mid April onwards, this wheatear breeds very commonly on the grassy steppes of Mongolia and half-heard snatches of its whistling, highly mimetic song were always causing me to look around, now for a wader, now for a tern. I became very familiar with it. Having compared my notes with the texts of modern field guides, I wish to emphasise several characters that seem to me to be incompletely appreciated, particularly in the all-important differentiation (to observers in Europe) of Isabelline from the pale morphs of the Greenland race of Wheatear *O. oenanthe leucorrhoa*.

First, it is important to recognise the differences in rump- and tail-pattern of wheatears. Fig. 1 shows these for five species. To my eyes, it is the tail-pattern and tail-shape of Isabelline which form the most immediate distinctions in the field from Wheatear. In that species, the tail-pattern is essentially an inverted black T abutting a white base; the

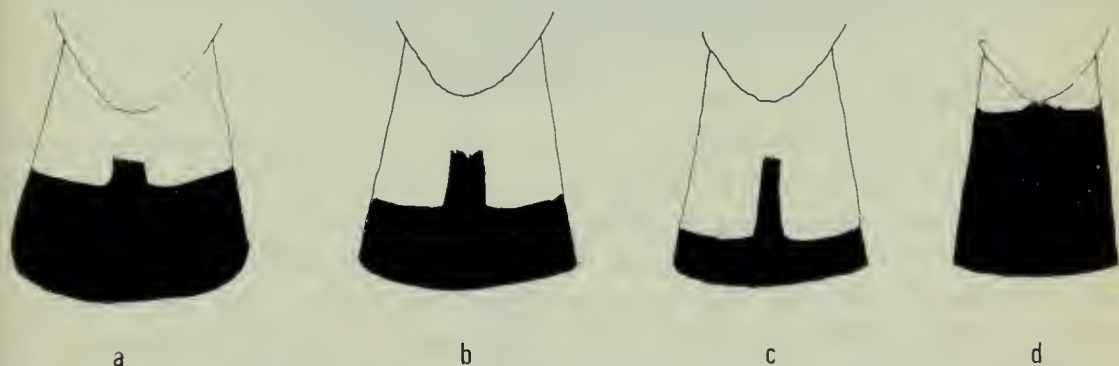


Fig. 1. Field appearance of tails of five wheatears *Oenanthe*. (a) Isabelline *O. isabellina*; (b) Wheatear *O. oenanthe*; (c) Pied *O. pleschanka* and Black-eared *O. hispanica*; (d) Desert *O. deserti* (Alan R. Kitson)

3. Isabelline Wheatear *Oenanthe isabellina* in flight, showing tail pattern, Mongolia, June 1977 (Alan R. Kitson)



terminal crossbar of the T takes up about one-third of the tail length and its stem intrudes well into the white basal area, even reaching its end and abutting the rump. In Isabelline, on the other hand, the tail itself looks broader and more rounded and the terminal crossbar is much broader, appearing to take up about half of the tail length (see plate 3), thereby shortening the stem, which never extends to the base. Thus, the stem is normally visible only as an Isabelline alights; on retreating birds, the tail-pattern is essentially of two contrasting bands bisecting its total length and, in a brief view, suggestive of Desert Wheatear *O. deserti*, which has a wholly black tail.

Unfortunately the tail-patterns of Wheatears are not always fully visible and other characters are essential for a certain identification. In the case of Isabelline, there are another two which appear to me free of doubt. First, Isabelline looks not only slightly larger-bodied than Wheatear (even *leucorrhoa*), but is also disproportionately large-headed. This feature is perhaps due to, or at least accentuated by, the species' more robust bill. Secondly, combined with large size and general paleness, the plumage of the underwing is diagnostic: Isabelline invariably has white or buff underwing-coverts and axillaries, which look pale against the grey-brown undersurface of its flight feathers. All races of Wheatear normally show dark-grey or black-barred coverts, which look uniform with or darker than the undersurface of their flight feathers. I can, therefore, confirm the few previous indications of the importance of underwing pattern in the identification of Isabelline (e.g. Benson 1970, Reynolds 1974, and P. J. Hayman in Gooders 1978).

Desert Warbler *Sylvia nana*

I saw about ten in low xerophytic cover in the arid steppe around Orok Nor in late April and early May. Undoubtedly of the nominate eastern race, they were small, pale, sandy-grey warblers, with—most unexpectedly—chestnut-red tails. Although the 1970 Dorset individual (Clafton 1972) showed 'rump and uppertail-coverts noticeably more russet' in the hand, this was not noted in the field; the one in Essex in 1975 (Harris 1977) had 'upper rump and base of long graduated tail rich tan, giving the most noticeable colour contrast, especially in flight.' These observations, however, gave no warning of the prominence of this character, which my

Mongolian birds showed strongly and consistently. Indeed, when perched, they looked like diminutive Isabelline Shrikes *Lanius isabellinus*. Close views revealed that the rufous and chestnut-red colours were confined to the central feathers and uppertail-coverts, the other tail feathers being dark brown with white on the outside.

A further point absent from current texts is that the cheeks of the Desert Warbler are darker than its crown. The two areas are divided by a faint pale supercilium which curves down behind the cheek patch. The indistinct face pattern so created is difficult to see in the field, but showed up in my photographs.

Two-barred Greenish *Phylloscopus plumbeitarsus*, **Greenish** *P. trochiloides* and **Green Warblers** *P. nitidus*

Two-barred Greenish Warblers were frequent at Ulan Bator in June and July and Greenish Warblers were common in the Hangai mountains in late June. I was able to make comparative studies of them; I also had previous experience of Green Warbler as a breeding bird in northeast Turkey and as a September migrant around the Caspian Sea, so am able to comment on the identification of all three species, which are closely allied (Williamson 1974).

To my eyes, all three are the size of Chiffchaff *P. collybita* and similarly structured, save for fractionally shorter tails. Their slight bills—again like Chiffchaff—are distinctly bi-coloured, with the upper mandible and the tip of the lower horn-coloured, but most of the lower flesh-coloured or pale orange. Their legs are brown-grey (though one young Green Warbler just out of the nest had pinkish legs). They all indulge in hovering while feeding and flick their wings. Thus, their differentiation in the field has to be based on subtle differences in plumage pattern and colours. Essentially, all appear olive-green above and pale below, exhibiting obviously long supercilia (reaching the hind crown and often turning up at the end, as do those of Arctic Warbler *P. borealis*) and at least one wing-bar (on the greater coverts). Their specific characters are analysed in table 1.

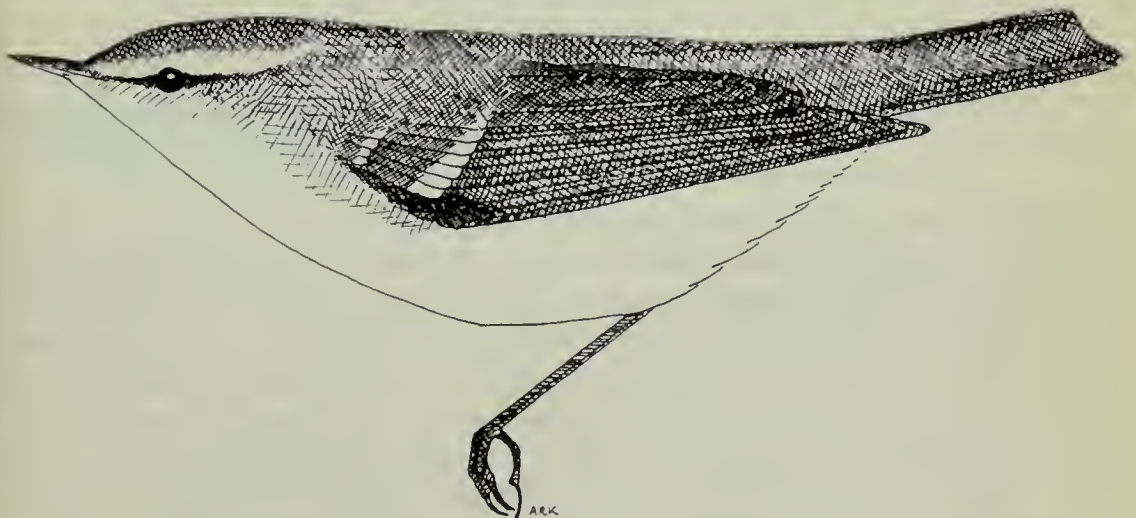


Fig. 2. Two-barred Greenish Warbler *Phylloscopus plumbeitarsus*, Mongolia, June 1977
(Alan R. Kitson)

Table 1. Field characters of Green *Phylloscopus nitidus*, Greenish *P. trochiloides* and Two-barred Greenish Warblers *P. plumbeitarsus*

Plumage characters	Common features	SPECIFIC DIFFERENCES		
		Green	Greenish	Two-barred Greenish
Tone of upperparts	Essentially olive-green; crown darker than mantle	Greenest, often approaching that of Wood Warbler <i>P. sibilatrix</i>	Grey- to olive-brown	Less grey than Greenish
Supercilium	Contrasts with dark olive eye-stripe	Yellowest, especially in juvenile	Cream	Cream
Wing	Central remiges show bright green edges			Brownest
Greater covert bar	Obvious	Slightly broader than Greenish, but finer than Two-barred Greenish: distally white, proximally white or cream	Finer than Two-barred Greenish; colour same as other two species. Sometimes totally absent	Broad, more obvious than in Yellow-browed Warbler <i>P. inornatus</i> , and wedge-shaped, broadest distally; colour same as other two species
Median covert bar	Much affected by wear	Invisible except on some birds in fresh plumage	As Green	Inconspicuous except at close range, but always present; cream
Colour of underparts	Pale	Suffused yellow, particularly on throat and breast, also on cheeks and sides of neck; colour less bright than in Wood, but suffusion obvious in good light; belly and vent white in adult, but yellow in juvenile	Sullied white, with grey wash on sides of neck and breast	Whiter than Greenish

R. F. Porter (*in litt.*), however, has seen at least one Green (in spring) with underparts lacking any yellow.

Voice transcriptions are difficult to compare, but the call notes of all three may be similar in structure and tone. To my ears, both Greenish and Two-barred Greenish utter a 'chew-ee' that recalls one of the notes of the House Sparrow *Passer domesticus*. Other transcriptions for Greenish include a loud 'chee-wee' (Williamson 1974) and a penetrating 'see-wee', with fuller emphasis on the second syllable and no plaintive tone (D. I. M. Wallace *in litt.*). Transcriptions of the call note of the Green are rather more diverse. To some ears, it recalls the flight call of Pied Wagtail *Motacilla alba* and has been written as 'chirr-ir-ip' (R. F. Porter, I. J. Ferguson-Lees *in litt.*) and 'tissick' (M. H. Rowntree *in litt.*). Alternatively,

P. J. Grant (*in litt.*) wrote it as 'psew' and he was reminded of the flight call of Yellow Wagtail *M. flava*. Williamson (1974), however, used the transcription 'chi-wee', identical to that of Greenish. The calls of Green and Greenish are described by Ali (1969) as 'indistinguishable', but Dr A. J. Gaston (*in litt.*) feels that the call of Green may have a more ringing quality.

I have no doubt that these three warblers are normally separable in the field by close observation of upper- and underpart tones (most green and yellow in Green), prominence of the greater covert bar (relatively large on Two-barred Greenish, see fig. 2) and absence of the median covert bar (normal on Green and Greenish).

Acknowledgements

Acknowledgements were made in the first paper in this three-part series (*Brit. Birds* 71: 558-562).

Summary

Field characters of Isabelline Wheatear *Oenanthe isabellina*, Desert Warbler *Sylvia nana*, Two-barred Greenish Warbler *Phylloscopus plumbeitarsus*, and Greenish Warbler *P. trochiloides* are described, based on observations made in Mongolia in spring and summer 1977. Comparable observations of Green Warbler *P. nitidus* are included.

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Local atlases

A useful spin-off from *The Atlas of Breeding Birds in Britain and Ireland* has been the detailed survey work on the breeding birds of certain counties. Mapping by 2 × 2 km squares (tetrads) now covers much of the south-eastern corner of England, so a summary of the state of play seems appropriate.

BEDFORDSHIRE *Bedfordshire Bird Atlas* by B. D. Harding, covering results of 1968-77 tetrad survey, due to be published on 31st March 1979. Normal price £4.20 (+ 50p postage), but *British Birds* readers can obtain it at prepublication price of £2.95 (+ 50p) by ordering and sending cheque, to arrive before 31st January 1979, to Bedfordshire Natural History Society, c/o Luton Museum and Art Gallery, Wardown Park, Luton LU2 7HA.

DEVON Five- or six-year survey started in 1977. Anyone willing to help should get in touch with H. P. Sitters, Uplands, Looseleigh Lane, Crownhill, Plymouth.

HERTFORDSHIRE Maps covering 1967-73 are all plotted in rough, but publication awaits compilation of tetrad maps of crops, habitats, geology, towns and so on, with analyses of correlations between these and the bird distributions.

HUNTINGDONSHIRE Survey by the Huntingdonshire Fauna & Flora Society, covering the old county of Huntingdonshire and including the Soke of Peterborough, will start in spring 1979 and last until summer 1981. Anyone willing to help should get in touch with J. D. Limentani, 10 Acacia Avenue, St Ives, Huntingdon, Cambridgeshire PE17 4TN.

KENT Maps are completed and will appear in a new *Birds of Kent* which is currently being written and which it is hoped will be published in 1980.

LEICESTERSHIRE Fieldwork for 'Leicestershire and Rutland Breeding Bird Atlas' being carried out during 1976-80; organised privately. Anyone willing to help should contact Tim Appleton and Griff Warrilow, Fishponds Cottage, Stanford Road, Oakham, Rutland, Leicestershire.

LINCOLNSHIRE Fieldwork has been completed, but regrettably the results remain unpublished through lack of funds.

LONDON The London Natural History Society published its excellent *Atlas of Breeding Birds of the London Area*, edited by D. J. Montier, in 1977. It costs £12.50, and was reviewed in the January 1978 issue (*Brit. Birds* 71: 43-44).

Mortality and movements of Dartford Warblers in England

Colin J. Bibby

Vulnerable in the short term to severe winters and heath fires, and in the long term to habitat fragmentation...



The Dartford Warbler *Sylvia undata* is a rare bird of the southern heaths in England and its conservation is a matter of some concern. The heaths where it occurs are of great natural history interest, yet, especially in Dorset, are much threatened by rapid reclamation (Moore 1962).

The Dartford Warbler is generally considered to be resident, in the sense that individuals can be found at all times of the year at the breeding sites; as a result, they suffer badly in severe weather (Tubbs 1967). On the other hand, Walpole-Bond (1914) suggested that some left in autumn to winter in coastal areas, and VENABLES (1934) found that, while a few

wintered on the Surrey heaths, they were largely absent until late March, April or sometimes even May. In the southern part of their range, there is evidence that the North African population is augmented in winter (Etchécopar & Hüe 1967), presumably by individuals which have crossed the Mediterranean. In southern France, Blondel's (1969) data suggest that the winter population was higher than that in summer, and Affré (1975) described the species as frequently found in the vicinity of Toulouse where it nested only rarely. Berthold (1973) found that Dartford Warblers (of Mediterranean origin) showed migratory restlessness under experimental conditions. In intensity, this activity was appropriate to a middle-distance or partial migrant and greater than that found for the largely sedentary Marmora's Warbler *Sylvia sarda*.

Based on a ringing programme and sight records, this paper reports on mortality and movements of English Dartford Warblers. These matters are of importance in view of the possible effects of habitat fragmentation in inhibiting the birds' spread, especially after one of their periodic population crashes. Information on mortality rates and site fidelity, though based on rather few birds, is valuable because little is known of these aspects for most British warblers.

Methods

The study was conducted on a fragmented area of about 1,010 ha of heathland at the western end of the Purbeck Peninsula, Dorset, as part of investigations on the ecology of the Dartford Warbler (Bibby 1977, Bibby in press, Bibby & Tubbs 1975). There were few other heaths or breeding Dartford Warblers within 5 km of this area, but there were two major concentrations 5-10 km distant. Within the study area, Hartland Moor National Nature Reserve was visited weekly from September 1974 to August 1976 (when it was burnt) and a number of the adults were colour-ringed. During the summers of 1975 and 1976, extensive studies of breeding were made throughout the larger area to establish the breeding population and success, and to identify any marked adults. Nestlings were marked with a single metal ring and recaptured when possible for subsequent identification. The study ended before 1977, but a visit was made in that summer to estimate the breeding population, and to locate and recatch as many ringed birds as possible; some extra records of sightings were provided by Bryan Pickess.

An investigation of distant movements was made by searching the county bird reports covering 1960-75 for records of Dartford Warblers away from known breeding areas.

Site fidelity and mortality of adults

The histories of all colour-ringed adult Dartford Warblers known to have been territory holders in one summer and to have survived and occupied breeding territories in the next year are summarised in table 1. In all cases but one, a surviving adult remained throughout its recorded life in its original territory or part of an adjacent one. Once, the deaths of a male in one territory and the neighbouring female resulted in the



4. Dartford Warbler *Sylvia undata*, Dorset, May 1976 (Colin J. Bibby)

survivors pairing and occupying part of the area previously partitioned between the two pairs. The exceptional case involved two (σ^c and ϕ^c) who were paired in April 1974 but did not breed: ϕ^c was not seen after early May and was presumed to have died; σ^c did not breed in 1974, but was in the same territory next year with a first-year female (ϕ^e) from nearby. Then, in 1976, ϕ^c was found breeding with an unmarked male in a territory about 1.2 km away. This area was a pine plantation where Dartford Warblers were particularly difficult to see and it must be assumed that she was overlooked there in 1975. Meanwhile, σ^c had lost ϕ^e and remained unmated for most of the summer of 1976, though another female eventually arrived and they reared a late brood. Thus, σ^c and ϕ^c had separated in the summer of 1974, though both survived. Divorce of this kind was probably rare. It is reasonable to assume that adults have died if they disappear from their territories.

Site tenacity of adults was observed in one spell of snow in April 1975, which caused all the Stonechats *Saxicola torquata* and Meadow Pipits *Anthus pratensis* to leave the heaths, but colour-ringed Dartford Warblers were found in their established territories. Further evidence of site tenacity came in August 1976, when fire destroyed much of Hartland Moor, though several of the Dartford Warblers on it survived. One adult male, known to have been present for at least two summers, was still in his territory six days after the fire, although no heathland vegetation remained within a kilometre and it was most unlikely that much food was available. Of the five colour-ringed adults present before the fire, not one was found to have survived and established a new territory elsewhere in 1977.

Table 1. Histories of individually marked Dartford Warblers *Sylvia undata* in Dorset

The first 18 birds were on Hartland Moor and followed weekly during 1974-76; the last eight were at Arne and checked only during the summer. F indicates known loss in a fire

Individual	Date ringed	Date last seen	Alive in summers of			
			1974	1975	1976	1977
♂A	2 Apr 74	—	+	+	+	
♀a	12 Apr 74	10 Aug 75	+	+		
♂B	15 Apr 74	30 Jun 75	+	+		
♀b	15 Apr 74	24 Jul 74	+			
♀c	15 Apr 74	—	+	+	+	+
♂C	15 Apr 74	—	+	+	+	F
♂D	15 Apr 74	12 Jun 74	+			
♂E	16 Apr 74	—	+	+	+	F
♂F	16 Apr 74	—	+	+	+	F
♂G	16 Apr 74	28 May 74	+			
♂H	11 Jun 74	12 Jun 74	+			
♀d	13 Jun 74	14 Feb 75	+			
♂I	13 Jun 74	28 Jul 75	+	+		
♂J	16 Sep 74	17 Jan 75	+			
♂K	22 Apr 75	—	—	+	+	F
♀e	25 Apr 75	16 Jun 75	—	+		
♂L	25 Apr 75	13 Dec 75	—	+		
♀f	16 Jul 75	—	—	+	+	F
♂M	8 Jul 74	—	—	+		
♂N	13 Jul 74	—	—	+		
♀g	24 Dec 74	—	—	+		
♀h	31 May 76	—	—	—	+	+
♀i	27 Jan 76	—	—	—	+	+
♂O	11 Jun 76	—	—	—	+	
♀j	10 Jun 76	—	—	—	+	
♀k	11 Jun 76	—	—	—	+	

Table 1 indicates an annual adult survival rate of at least $50.0 \pm 8.3\%$, with no apparent difference between the sexes.

Survival and dispersion of juveniles

Of 16 juveniles colour-ringed in summer 1974, six were never seen again, two were last seen in August and three in October. One was found about 8.2 km away on 15th November and never again. Four survived to breed in 1975 at distances from their places of origin of 5.8 km (♂), 3.7 km (♂), 1.3 km (♂) and 0.6 km (♀), in all cases but the last on a different heath. One of these (a male) was first located at his new site on 12th October, having settled and started singing in a place previously unoccupied by Dartford Warblers, and attracted a female. He remained in the area throughout the winter and bred in the next summer. Thus, on the basis of a small sample, a minimum of $25 \pm 10.8\%$ of these juveniles ringed at ages between 20 and about 50 days survived to the next year.

In 1975, 62 nestlings were ringed from 18 successful nests: about one-quarter of the year's production of young in the study area. During the breeding season of 1976, the whole area was searched very thoroughly so that all the breeding pairs were checked for rings, but only two of those

ringed as nestlings were found to have survived. Both were females, breeding respectively about 0.2 km and 1.0 km from where they were hatched: one on its native heath and one not. This observed survival rate of 3.2% from fledging to first breeding was recorded between years when the population in the area fell by 53.3%.

By 1976, the population of the study area was only 26 pairs. These raised about 125 young, of which 102 were ringed in the nest. In 1977, numbers had increased to 30 pairs, in spite of the fact that five territories had been burnt and the occupants had probably perished. Of the 60 adults breeding in 1977, 12 were identified as 1976 nestlings and 40 were certainly not; eight were not adequately seen, but, on the basis of the observed proportions, two were probably one-year-olds. Thus, it is estimated that 14 ringed nestlings from 1976 were breeding in the area in 1977, indicating a minimum survival rate of 13.7%. In addition, one male was found breeding outside the area, 9.1 km away: this bird was raised in one of the territories destroyed by fire in August 1976. Six of those within the study area were caught and individually identified. Their movements were respectively 3.4 km (♀), 2.7 km (♂), 2.5 km (♂), 1.2 km (♀), 0.6 km (♂) and 0.5 km (♀), which in all but one case were from one fragment of heath to another.

Considering the three years together, nine nestlings and four juveniles which survived were individually identified. Of these 13, three were on the site of origin and the rest had moved to another 'island' of heath, though the evidence of the next section suggests that an even higher proportion in fact moved. The mean movement of the sexes did not quite differ significantly, though the trend was in the unexpected direction ($8\sigma\sigma: 3.28 \pm 2.93$ km; $5\sigma\sigma: 1.28 \pm 1.24$ km; $p \sim 0.15$). Of the nine individuals ringed as nestlings, the early ringed ones apparently provided a higher proportion of the survivors: half the young were ringed before 7th June, but seven of the nine survivors (78%) came from this period ($p \sim 0.2$, Kolmogorov Smirnov test).

The population equation

Using the known breeding data (Bibby in press) and the survival rates estimated above, it was possible to assemble putative population equations. Table 2 approximates the situation during the years 1975-76 and 1976-77. In 1975-76, the almost complete failure of the young to survive caused a marked drop in the population which in fact exceeded the estimated adult mortality. In this year, the agreement between observation and prediction was reasonable, though in fact the adults must have suffered a greater mortality to account for the whole population drop. This might have been caused by the same factor which led to the unexpectedly severe juvenile mortality.

In 1976-77, there was a gross difference between prediction and observation, because, in spite of the extra loss of adults as the result of fire, the population increased by 15%, while the known recruitment of young predicted a drop of about 25%. The only possible explanation of this discrepancy was that more young of the previous year in fact survived,

but their breeding dispersion was such that much of the recruitment came from outside the study area. About 50% of surviving juveniles would have had to move more than 5 km to balance the calculations.

Table 2a. Putative population equations for Dartford Warblers *Sylvia undata* in Dorset in 1975-76 and 1976-77

A = adult survival rate; B = young reared per pair; C = young survival rate
Figure of 40.4% for A in 1976-77 is based on 21 pairs surviving normally and five being lost to fire

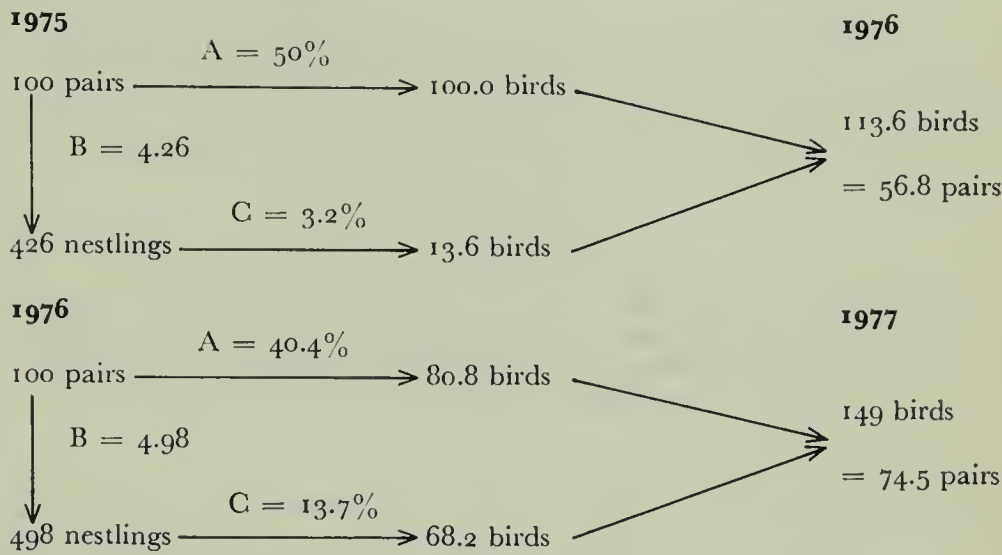


Table 2b. Comparison of predicted and observed population changes

Years	POPULATION CHANGES	
	Predicted	Observed
1975-76	(56.8-100) = -43.2%	-53.3%
1976-77	(74.5-100) = -25.5%	+15.4%

Movements

In Britain, a minimum of 192 Dartford Warblers were recorded outside the breeding areas from 1960 to 1975 (fig. 1). The majority were in coastal areas between Kent, mainly Dungeness (Stone 1972), and Dorset. A juvenile ringed in the New Forest moved to Barnes, Surrey, where it was killed by a cat on 1st November 1975. Four were recorded in Ireland during this period, where one had previously been killed at the Tuskar Lighthouse, Wexford, in 1912 (Barrington 1912), and four also reached the Isles of Scilly. A further movement involving a sea crossing was of one on a tramp steamer in the English Channel at 50°N, 1-3°W (north of the Cherbourg Peninsula and somewhat nearer France than England) on 4th November 1974 (R. J. Prytherch *in litt.*). Though it is possible that some were Continental, British origin is more likely: Dartford Warblers are scarce breeders or absent in the areas of France nearest to Britain, as shown in fig. 1 (data from Yeatman 1976).

Dates of occurrence, of first sightings for individuals seen more than once, showed a marked peak in autumn, with 60% between 3rd October

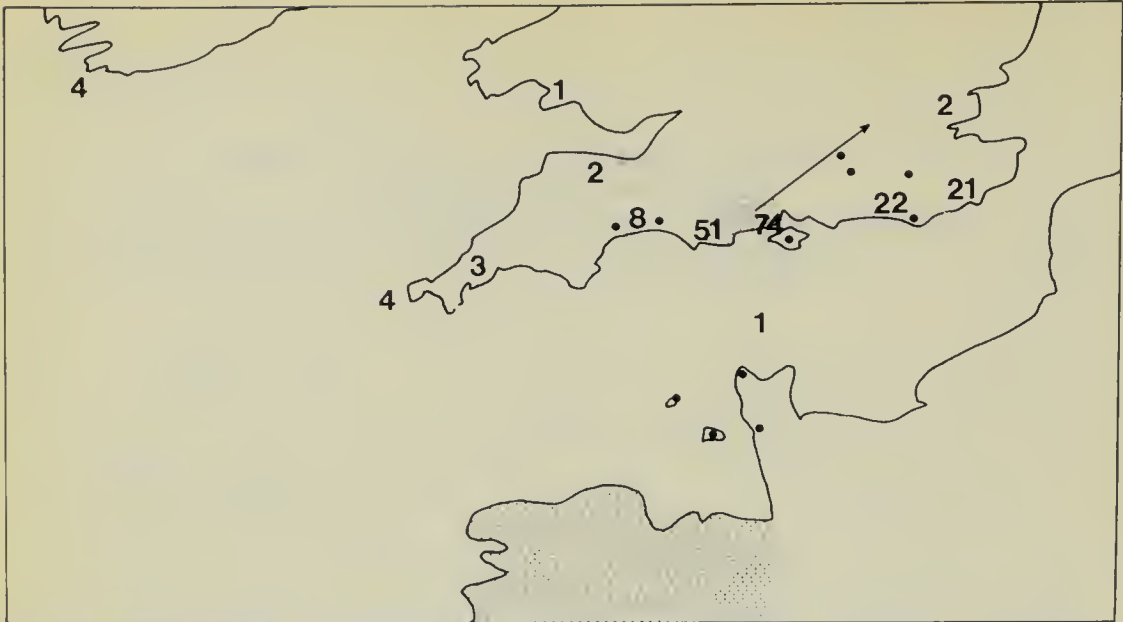


Fig. 1. Distribution of occurrences of Dartford Warblers *Sylvia undata* in Britain and Ireland away from breeding areas, 1960-75; minimum numbers of individual birds shown by county. Stippled areas represent main breeding areas and dots isolated outposts. Arrow shows the only distant ringing recovery

and 6th November (fig. 2). Thus, departure from the heaths generally followed the completion of moult in late September (personal observation), with few found earlier; this exodus coincided with a period of territorial activity and song more conspicuous than that in spring. Records away from breeding areas dwindled in November and December; and there were only two in January. Small numbers (10% of the total) were

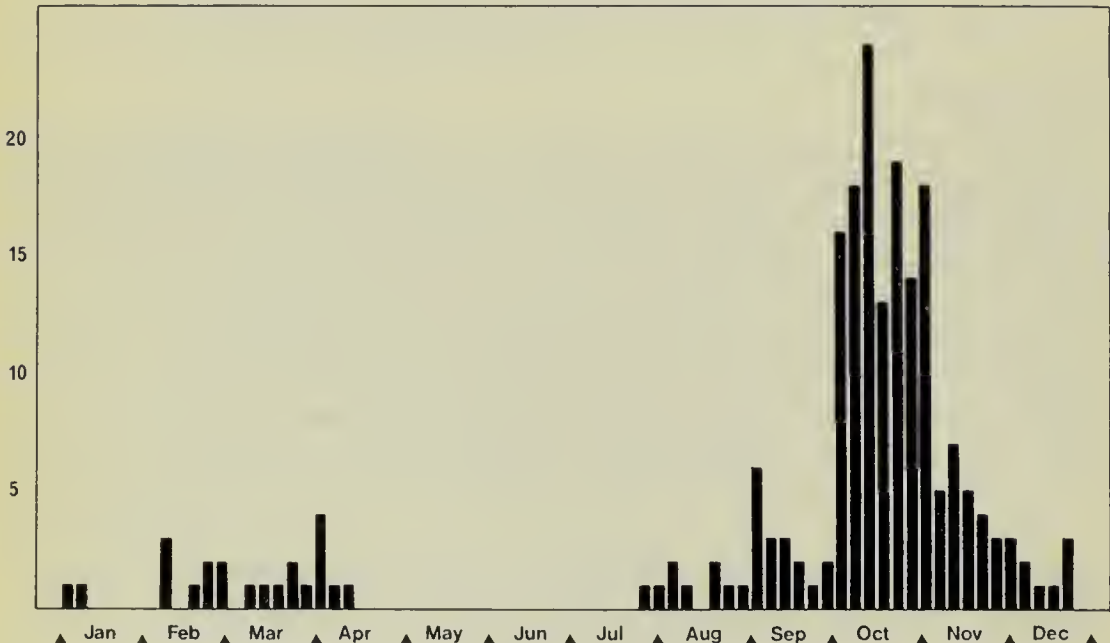


Fig. 2. Seasonal distribution by five-day periods of occurrences of Dartford Warblers *Sylvia undata* in Britain and Ireland away from breeding areas, 1960-75. Each bird is shown only in the period when it was first recorded

seen between early February and mid April, but there was none in the breeding season.

The paucity of January records shows that coastal wintering birds can not adequately account for the occurrences, so it is presumed that some individuals leave the country for the winter. Variation of migration records, between sites and between species (see for instance Davis 1967 and Sharrock 1968 for *Sylvia* warblers), makes it impossible to assess the significance of the fact that nine times more Dartford Warblers occurred in autumn than in spring.

Comparison of the numbers of records in each non-breeding season with the estimated breeding population of the preceding summer (which varied in the period studied from 11 to 560 pairs, Bibby & Tubbs 1975) (fig. 3) provides evidence of the reasons for movements. If they were

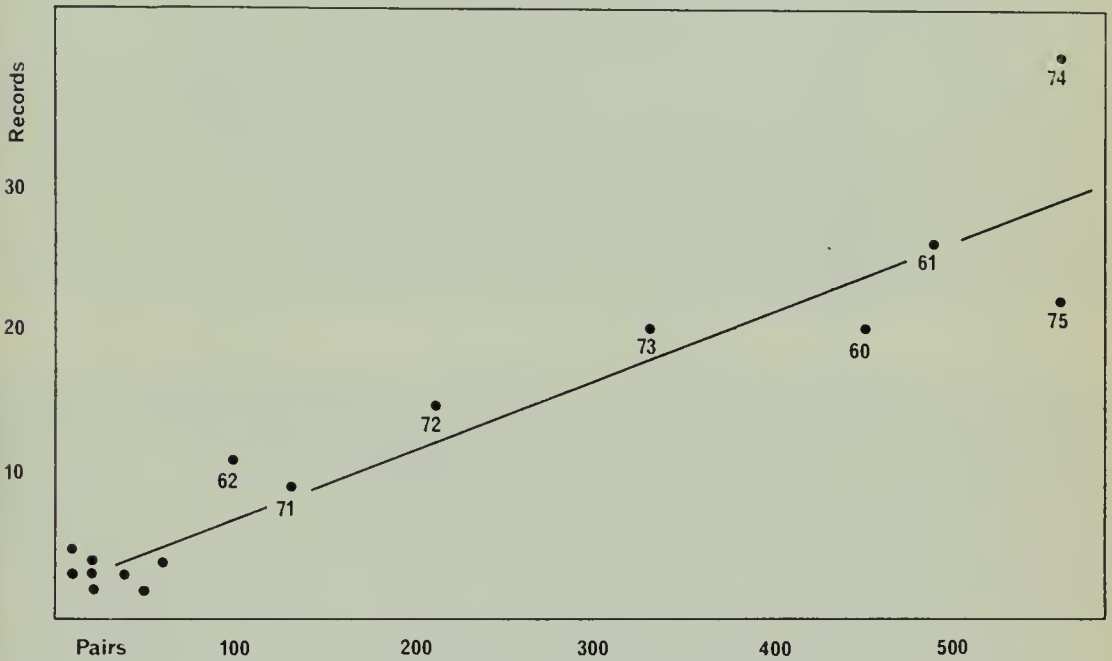


Fig. 3. Relationship between numbers of records of Dartford Warblers *Sylvia undata* in Britain and Ireland away from breeding areas each autumn and winter in 1960-75, and estimated numbers of pairs breeding in England in previous summer. The eight years with highest breeding levels are individually identified by last two digits.

$$(y = 0.048x + 2.47, r_{14} = 0.941)$$

eruptive and influenced by shortage of living space caused by high population levels, then they would be more frequent in proportion to some power (> 1) of the population size. In fact, partial migration is indicated, since the records away from breeding areas increased in almost exact proportion to the breeding population, with good correlation ($r_{14} = 0.941$).

Even in the years of scarcity following the severe winters of 1961/62 and 1962/63, Dartford Warblers still occurred far from their native heaths, despite suitable territories being vacant within a few hundred metres. Clearly, a proportion of Dartford Warblers are obligatory migrants. That proportion is not known, but the mean number of migration records

from the data in fig. 3 was one per 15.9 breeding pairs. Using the known breeding productivity of 4.6 young per pair (Bibby in press), this was equivalent to one record for every 105 Dartford Warblers alive in late summer (making no allowances for post-fledging losses). As 1% of England's Dartford Warblers are seen away from their breeding sites each autumn, the proportion emigrating must be high, since the chances of an individual being detected are low.

There is no known way to tell the age of a Dartford Warbler in autumn after the moult (Svensson 1970). There were thus only two records of individuals of known age: an adult female caught at Steart, Somerset, on 11th August 1974 (the recorded details were peculiar, but sufficient to confirm that she was moulting her primaries and hence was adult) and a ringed juvenile. Since, however, as already described, most local movements were by juveniles, it is probable that they were also the major participants in the longer journeys.

Discussion

The calculated mortality rate of adults was much in line with that of other passerines in temperate regions (Cody 1971), especially in view of the wide confidence limits on the estimate. If anything, the established adult Dartford Warbler may be comparatively long-lived; even with a small ringing programme over four seasons, one individual reached four years of age and three more reached three before being destroyed by fire. These figures compare with maximum ages ever recorded by the BTO ringing scheme of four to six years for most other similar-sized warblers (Mead 1974).

Because the 1975 crop of young largely failed for unknown reasons, only one realistic estimate of survival from nest to first breeding was made (13.7% within the study area). This figure was insufficient to account for the population growth from 1976 to 1977, which would have required a nestling survival rate of about 30%. The only explanation of this is that some 16% more nestlings did in fact survive, but bred outside the area and were replaced by a comparable number of immigrants. The fact that one was found breeding at a distance of 9.1 km shows that this is possible, while the high average distance of recorded movements (σ 3.3 km; ϕ 1.3 km) confirms that larger movements taking birds out of the study area would be expected.

High mobility of young birds would account for the rapid spread of Dartford Warblers from the low population in 1963. The mean rate of increase was 45% a year, and this involved the recolonisation of new sites at the same time as existing ones were filling up. Had the species been highly sedentary, it would have been expected to fill all the gaps on the occupied sites before crowding led to eruptive dispersal and further colonisation. The derived figures of adult survival (50%), nestling survival (30%) and young reared per pair (4.6) would predict a population growth rate of about 20% a year. There is some evidence that earlier nesting might have led to more productive breeding in some of these years (Bibby in press), although this alone would have been insufficient to



5 & 6. Dartford Warblers *Sylvia undata*, Dorset, June 1976 (M. W. Richards)





7. Dartford Warblers *Sylvia undata*, Dorset, May 1975 (F. V. Blackburn)

explain such rapid population growth. It seems that the survival of adults or nestlings must have been still higher in this period. The latter would be more likely as those leaving their native heaths would have had a higher chance of encountering a suitable vacant area at a time when there were more heaths and fewer Dartford Warblers.

Thus, it appears that adult Dartford Warblers are faithful to territories once established, and maintain them even in such drastic circumstances as failure of food availability caused by snow or fire. Young, on the other hand, have a high tendency to move in their first autumn, even at times when numbers are so low that suitable areas are vacant within a few hundred metres. The benefit of finding a more distant area which is completely vacant must be high, since the first immigrants could found a whole new colony. From the young's point of view, the prizes are high, but so are the stakes if the fragmentation of heaths leads to a high risk of total failure to find a suitable place to settle and breed.

There was no significant difference between the sexes in the extents of their dispersion, although, if anything, males moved farther than females within the study site. This is not the common pattern: females are usually more dispersive (Greenwood & Harvey 1977 and references

therein). If the interpretation of Dartford Warbler movements is correct, a juvenile male might benefit by wandering rather than staying and having to compete with established birds for a territory and a mate. A juvenile female would perhaps secure a better chance of rearing young if she settled with the first single male territory-holder she encountered. The sex ratio of the 50% of young estimated to have moved more than 5 km is unknown, so this aspect remains a matter for conjecture.

There was suggestive evidence that early-reared young were more likely to be found settled near the natal site, suggesting that, at high population levels, the more distant movers might have been forced to go farther through joining the autumn competition for territories too late.

Those birds which appeared well away from the breeding areas in autumn had obviously failed to establish a territory. The large proportion of records in Kent and Sussex in relation to the very small breeding populations nearby may be no coincidence. In these counties, the suitable breeding areas are so few and scattered that the chances of a dispersing bird's finding one would be low. A high loss of juveniles in this way may have caused the comparatively slow rate of recovery of Dartford Warbler populations in these fringe areas after 1963. In the Dorset and New Forest strongholds, the number of coastal records was lower in proportion to the nearby breeding populations, perhaps because of the less fragmented nature of the heaths in these areas. As the heaths become more isolated from each other in future, the Dartford Warbler's rate of recovery after a population slump may be decreased.

The evidence (fig. 1) suggests that the longer movements of Dartford Warblers are orientated southwards, although the paucity of northerly movements may have reflected the lower chances of detection inland. Further, it is possible that they moved along the English south coast rather than undertaking a sea crossing, which could bias the distribution of records. The combination of lack of midwinter records, followed by signs of a spring movement, suggest that some probably left England altogether. There was no direct evidence of this, but the single record in the middle of the Channel, and the occurrences on the Isles of Scilly and in Ireland are suggestive. One may conclude that the Dartford Warbler ought to be regarded as a partial migrant in England. Such partial migration could be beneficial if, by moving south, individuals increased their chances of surviving a severe winter in comparison with those which remained. If such a characteristic is reasonably heritable, then the degree of migratory behaviour in the population could rapidly be selected at a level appropriate to the average frequency of severe winters. The recent development of partial migration by the Bearded Tit *Panurus biarmicus* (Axell 1964) might be a similar case. It is not beyond the bounds of possibility that the survivors of the 1962/63 winter were out of the country at the time. Ash (1964) reported that all the resident Dartford Warblers had apparently vanished after the first heavy snowfall and subsequent sightings were on the coast in March. These latter birds could have been returning migrants, which might then have settled well away from their natal areas.

Acknowledgements

My thanks go to B. Pickess for various help during the study and to Dr C. J. Cadbury, Dr P. R. Evans and Dr G. J. Thomas for comments on the script.

Summary

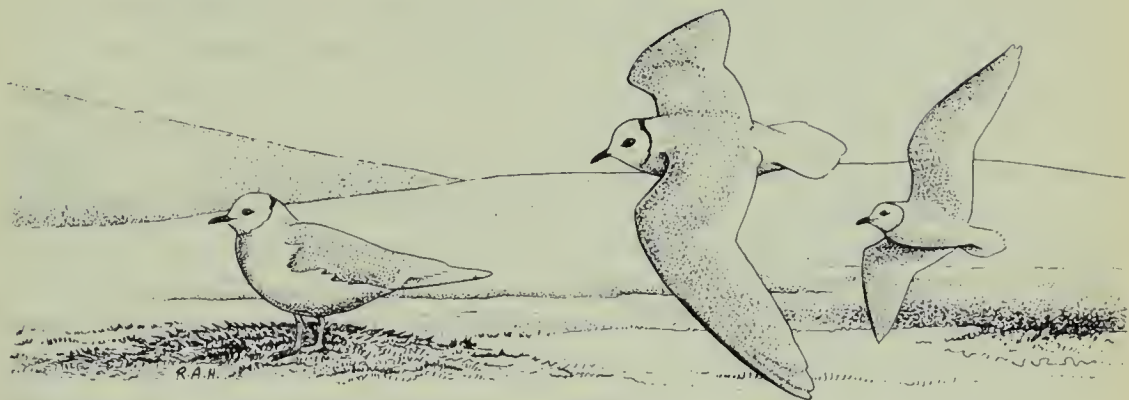
During a limited study, adult Dartford Warblers *Sylvia undata* were found to be faithful to territories once these had been established, and to survive at $50 \pm 8.3\%$ per annum. Survival rates of nestlings to first breeding were 3.2% and 13.7% in two successive seasons, but nearly 90% moved from their natal heaths. In the period 1960-75, there were records of 192 Dartford Warblers well away from breeding areas in England, the majority being in October. The numbers of these distant movers increased in direct proportion to the size of the breeding population and some still occurred in the years when Dartford Warblers were very scarce. In discussion, it is suggested that movements represented a partial migration as much as post-juvenile dispersal. This might aid the Dartford Warbler's expansion after a population slump or raise the chances of some surviving a severe winter, but increasing fragmentation of the heaths could increasingly become a limitation.

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Ross's Gulls in Alaska

M. Densley



On 3rd August 1894, beset in ice off the Siberian coast, the Norwegian arctic explorer, Fridtjof Nansen, entered in his diary: 'Today my longing has at last been satisfied, I have shot Ross's Gull. This rare and mysterious inhabitant of the unknown north, which is only occasionally seen, and of which no one knows whence it came and whither it goeth, which belongs exclusively to the world to which the imagination aspires, is what I have always longed to discover.'

Ross's Gull *Rhodostethia rosea* is a northeast Palearctic species that breeds only in the lower valleys and deltas of some of the larger, north-flowing rivers of extreme eastern Siberia, including those of the Kolyma, Alezaya and Indigirka (Dementiev & Gladkov 1951). The breeding grounds were discovered and subsequently described by the Russian explorer S. A. Buturlin, who spent the spring and summer of 1905 in the delta of the Kolyma (Buturlin 1906).

Photographs of Ross's Gull, with a brief accompanying text, appeared in *British Birds* almost 20 years ago (Kist 1959); and two fine photographs of an immature were reproduced in November 1974 (*Brit. Birds* 67: plate 64). More recently, the post-breeding dispersal of the species, and its status in Britain and Ireland and in Alaska, have been discussed in some detail (Densley 1977). Data obtained in the Barrow region of northern Alaska in autumn 1975 form the basis for much of the present paper.

In the field

Plumage

With the exception of one still in full summer plumage on 21st September, all the adult Ross's Gulls that I saw at Barrow in 1975 were in winter plumage. Many showed traces of the summer collar, but the pink of the body and the conspicuous white hind edge to the open wings were the most obvious plumage features in flight, even at a distance. The legs become

dull orange-red in winter, a feature that many illustrations fail to show correctly.

The immatures were in two plumage stages. Many in August and some in September were what Buturlin (1906) described as 'older specimens in first plumage', which is very like that of many newly-fledged juvenile small gulls, with much dark brown and gold on the mantle, head and wings. Buturlin found that young on the breeding grounds in such plumages were almost invisible against dead vegetation; at Barrow, I too found them very difficult to see on the coastal shingle, almost treading on them at times. All the later immatures were in the readily separable first-winter plumage, which, except for the wings, rump and tail, is very like that of winter adults.

The adults were also often hard to pick out, whether in flight against a lead-grey sky or at rest on snow or ice. Neither the adults nor the immatures were shy, and with care they could usually be approached closely.

Possible function of dark eye patches

A characteristic feature of the head of Ross's Gulls in winter and in immature plumage is the dark feather patches around the eyes, giving them an immediately recognisable appearance which I likened to that of a highwayman. In the field, this often makes the eye appear even bigger than it is. These patches are formed by a mass of stiff, hair-like feathers, the structure of which is detailed on page 27.

Ross's Gulls spend the winter in the Arctic Ocean, taking food on or near the surface of temporarily open (but rapidly freezing) water, often swept by strong winds and in very low temperatures. In these circumstances, the gull runs a very high risk of having its eye affected by freezing spray. The peculiar mass of stiff feathers might well be a form of protective shield, or 'spray guard', for the eye, performing much the same function as human eyelashes. Their black coloration would also tend to make them fractionally less cold than the rest of the predominantly grey and white plumage, and could marginally reduce the risk of water freezing on them.

Additionally, the dark eye patches could reduce the risk of damage to the gull's sight from ice and water glare. Eskimos commonly rub soot on the face, around their eyes, as an effective precaution against snow blindness.

Significantly, these black patches are moulted in spring and are absent from the plumage on the breeding grounds in summer, when the gulls would not be subject to the same risks. I have found no reference to this in any of the literature, and I am not aware of such an adaptation in any other bird species.

Flight

On migration, the flight was fast and direct, with deep, rapid beats, and resembled that of a pigeon (Columbidae). Some migrants performed a 'tumbling' flight, like the action of other gull species coming to roost at dusk.

Food-searching in broken ice usually took place from a height of about 3 m, when the flight was slow, more leisurely and buoyant, resembling that of a tern *Sterna*, with lazy, shallow wingbeats and much flexing of the tail. Concentrations searching in this characteristic way constantly attracted distant individuals, which homed in to join the assembly.

On the ground, Ross's Gulls are slow and lethargic, with a clumsy, rolling, pigeon-like gait.

Feeding

On migration, and presumably in winter too, the species feeds on small near-surface organisms (such as crustaceans and small fish) under the ice. Recorded foods taken from stomach samples in Asia and America include the amphipods *Apherusa glacialis*, *Atylus bruggeni* and *Gammarus locusta*, and the arctic cod *Boreogadus saida* (Collette & Nansen 1900, Watson & Divoky 1972).

Having located a potential feeding area, the gulls repeatedly quartered it, flying very low over the water into the wind or against the current, feeding as they went. At the top of the 'beat' they then drifted right back to start again, either on the wind or on the water. On several occasions, I saw individuals or parties riding down to the bottom of a beat aboard small ice floes.

Food was taken on or just below the surface of the ice or water by four main methods: (a) contact-dipping, in which the food is snatched from the surface as the bird continues forward progression; (b) hovering, in which it remains stationary and airborne, and takes food from the surface; (c) surface-plunging, in which it half closes its wings and settles momentarily on the water, immersing only the breast and part of the head; and (d) surface-feeding, in which it rides on the water surface, taking food from the water around it. (Terms used by Ashmole & Ashmole 1967.)

In no case did I see a Ross's Gull completely submerge and two-thirds of them fed by surface-plunging and about one-quarter by hovering. On the breeding grounds, food is usually obtained from freshwater lakes by surface-feeding (Buturlin 1906). During both hovering and surface-plunging, the gulls often paddled their feet in the water while still airborne. In favoured feeding spots, surface-plunging took place so repeatedly that they hardly appeared to become airborne between plunges, and the feet as well as the wings were used to assist them into the air again.

Some of the gulls fed in small groups on the water along the tide edge, much as phalaropes *Phalaropus*, usually swimming against the current and taking food from the surface, at times as part of mixed groups which included Grey Phalaropes *P. fulicarius* and Sabine's Gulls *Larus sabini*. In a few instances, single, almost invariably immature, Ross's Gulls walked out of the water to pick food from the shingle along the shore.

Ross's Gulls frequently associated with Sabine's Gulls when feeding. The two species appear to have very similar life styles: both breed mainly in freshwater marshes and become insectivorous in summer; outside the breeding season, they move to a saltwater environment on the coast. It may be that the phalarope-style feeding along the tide-line, indulged in

during the autumn by both species, is some form of transitional feeding stage, during which adults and birds of the year adapt themselves once more to salt water.

All the Ross's Gulls in Alaska were silent. In March 1976, however, at Scarborough, North Yorkshire, I heard one call on three occasions, in alarm or annoyance: a harsh, strident, tern-like 'kik-kik-kik-kik-kik'. This call has not apparently been recorded elsewhere.

In the hand

Barrow has been the source of most of the Ross's Gull skins for the world's museums. The Naval Arctic Research Laboratory (NARL) at Barrow has a good series, of high quality. The average weight of these, recorded at the time of death, was 187.5 g (Buturlin's published average, for breeding Ross's Gulls, was 200-250 g). Five specimens were taken at Barrow during my stay (three adults and two juveniles) and the low weights of four (169.5 g, 167 g, 158 g, 148 g) suggested that they were new arrivals.

Skins and fresh birds were examined for moult. One adult male, dated early October 1958, showed evidence of newly completed moult on the uppertail-coverts. Another (unsexed) winter adult from the same period displayed a similar condition on the upper and lower breast, as well as on the uppertail-coverts; it also had its first and third primaries still partially in sheath. An adult male on 9th September 1975 had its first three primaries incompletely formed, the second being only about one-third grown. None of the immatures showed any signs of active moult. Buturlin (1906) mentioned that the adults he examined in Siberia on 6th and 7th July were all moulting their outer primaries. This wing moult must be a protracted process in at least some individuals, and obviously does not prevent them from migrating (initially only along the coast).

Kenneth Toovak, who collected most of the NARL Ross's Gulls in early



Fig. 1. First primaries of two Ross's Gulls *Rhodostethia rosea* from Barrow, Alaska, October 1958, showing black markings on outer webs

October 1958, from about 1,000 that he estimated along some 16 km of the beach that day, recalled selecting individuals for the intense pinkness of their plumage, which has since almost completely disappeared (as it invariably does in collections). All authorities state that the only black in the plumage of adult Ross's Gulls, apart from on the neck in summer and on the head in winter, is on the outer web of the second primary. On two winter adults (one male, one female) at NARL, I found distinct black patterning also on the outer web of the tiny first primary (fig. 1), a feature apparently not described before.

The dark feather patches around the eyes on winter-plumaged and immature Ross's Gulls are mentioned on page 24. Examination in the hand of the structure of this feathering shows it to be quite distinctive. The basal half of the feathers appears quite normal, but their tips end in what look like several individual, very fine, stiff black hairs, 3-6 mm long. These form a dense mat in front of, above and below the eye, protruding well clear of the recess in which the eye is set; they are very resilient to the touch. A possible function for these is suggested on page 24.

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Summary

In autumn 1975, I studied Ross's Gulls *Rhodostethia rosea* in the Barrow region of Alaska. Of the adults, all but one were in winter plumage with pink plumage and dull orange-red legs. Immatures were in two plumage stages: one with much dark brown and gold on mantle, head and wings; the other in first-winter plumage, very like that of winter adults except for wings, rump and tail. Neither adults nor immatures were shy.

The flight of the species on migration was fast and direct, with deep, rapid beats, like that of a pigeon (Columbidae); a 'tumbling' flight was also recorded. When feeding, the flight was slow and tern-like.

Food consisted of small near-surface organisms. Four main feeding methods were noted: contact-dipping, hovering, surface-plunging and surface-feeding (terms from Ashmole & Ashmole 1967); surface-plunging was commonest. Some Ross's Gulls fed in small groups at the tide edge, much as phalaropes *Phalaropus*. The species frequently associated with Sabine's Gulls *Larus sabini*; both species have similar life styles. It is suggested that the phalarope-like feeding may be a transitional stage, enabling both species to adapt again to the saltwater habitat of their winter quarters.

The skin collection at Barrow and five fresh specimens were examined for moult: some adults showed active wing moult in September and October, evidently a protracted process in some individuals. (In Siberia, Buturlin 1906 found moult of outer primaries in July.) On two winter adults, distinct black patterning was present on the outer web of the first primaries, apparently not recorded before.

The black eye patches of winter and immature plumages comprise feather tips looking like very fine, stiff, black hairs 3-6 mm long. It is suggested that these may function as a

protective guard against freezing spray during the arctic winter, and also reduce risk of damage to the gulls' sight through ice and water glare.

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Personalities

18 O. J. Merne

It was probably in 1961 that Britishers first became aware of a rather enthusiastic young birdwatcher by the name of Merne. This was during the heyday of Great Saltee Bird Observatory, when Oscar was persuaded to ring his first bird. Today, some 20,000 birds later, Oscar's name is well known throughout Europe and, through his presence at British and European bird conferences, hundreds of bird people know him personally.

In 1970, on my first trip to the Wexford Slob, and unsure of my way, I asked a local man for directions. He promptly turned the question back on me, with 'Is it the Slob or Mr Merne you want?', thus exploding any misconception I might have had that *any* slob and Oscar were one and the same. That first meeting was a brief one. Since then, chance or design have brought us together on diverse occasions, ranging from ringing trips on Great Saltee and as participants or co-organisers of conferences,

to watching the Muppet Show when we were the only residents at the Hayes Conference Centre at Swanwick.

The way that Oscar goes about any task, from the simplest to the most exasperating, is a source of constant wonder to me. There is never hurry or fluster, but a methodical, gentle approach that belies complexity, and skill that makes the operation seem far more simple than it really is. For instance, just after ringing Gannets on Great Saltee, Oscar was approached by several day-tripping photographers—members of a well-known photographic society—to take some close-ups of the nesting birds for them. He agreed, and, being confronted with several cameras of dubious origin and sales-catching complexity, obviously bought by persons more enthusiastic about the activity of photography than its objectives, he happily sat and adjusted each, changed lenses, removed funnels, put on or took off filters as necessary and then, with cameras hanging all over him, down the Gannet cliff he climbed, to the open-mouthed fascination of the onlookers. Pictures all taken, he climbed back to the clifftop, only to be confronted by several more 'photographers' who had just arrived. Showing the same apparent enthusiasm, he repeated the whole affair. One of the group is reputed to have asked later,

8. O. J. Merne holding Buff-breasted Sandpiper *Tryngites subruficollis*, Co. Wexford, September 1966 (Kenneth W. Perry)



'What kind of birds are they anyway?'. Oscar's reply was doubtless wholly tactful.

Oscar is not only the most experienced and sure-footed climber whom I know, but he has swum the 10 m from Great Saltee to the Makestone Rock with all the paraphernalia of ringing draped behind him, looking like some oddly shaped pilot fish. He has ringed more birds and trained more ringers than anyone else in Ireland. He has also spent more time in the air with the birds than most ornithologists in Europe: counting those on the Shannon complex and other wetlands from a light aircraft.* Although renowned for his wardening of the North Slob's Greenland White-fronted Geese and other wildfowl since his appointment in 1968, Oscar's recent promotion in the Forest and Wildlife Service has meant a relocation from Wexford to Co. Wicklow.

Oscar Merne was born in Dublin in 1943, a fact unrecorded in history because of other happenings of greater priority that year; similarly, in 1969, extensive radio, television and press coverage of his and his wife's return to the Kerry mainland after being marooned on the Blaskets with their infant son was relegated to page 2, since the Americans inconsiderately chose that day to land on the Moon. After following his father's footsteps into the world of banking, a period of dynamic inactivity during a bank strike led Oscar into the world of wildlife films for television. During a film-making trip to Iceland, he met a young English librarian, Margaret, and they were married several months later. After touring most European countries, they returned to Ireland, and Oscar was employed jointly by the Irish Wildbird Conservancy and the Department of Lands to warden the North Slob. Then, the primitive housing conditions were equalled only by the desolation of the location; today, the North Slob has all the mod. cons. of a national wildfowl reserve: hides, an observation tower, lecturing facilities, warden's house, office, library and even a wildfowl collection to ensure that summer tourists go away knowing what a goose looks like. The North Slob bears the stamp of a man whose expertise in the realms of ornithology and conservation is acknowledged as among the most progressive in Ireland.

His apprenticeship in the banking world has made Oscar that elusive combination of meticulous scientist and efficient organiser; he is also in constant demand as a speaker and writer. The offices held by him are impressive, including IWC Council, IWC Executive, BOU Council, Irish Records Panel and BTO Ringing Committee, all in addition to his counting, ringing, lecturing, writing, organising and leading. He also spends quite a lot of time with Margaret and his three children, although visitors to Saltee over the past few years may be forgiven for thinking that *they* spend a lot of time with him. The Mernes are very much a part of the Irish bird scene.

I have had four letters from Oscar recently. Each was on a sheet of paper measuring 10 cm by 8 cm and contained about 30 words; yet, in each case, the message was as clear as a Curlew's whistle. Can we all learn something from this?

MICHAEL O'MEARA

* For the latest hair-raising episode, see page 49.

Mystery photographs

25 Crakes *Porzana* can be difficult: a fleeting view of one dashing from one patch of cover to another, or flying—legs dangling—between clumps of reeds *Phragmites*, is frequently the order of the day. Yet, if you stay still in a ‘crake spot’, it is surprising how confiding they become, creeping with nervous jerks along the muddy edge of a reed-swamp or, in the case of the bird pictured here, venturing out to feed in a tiny pool of diluted sewage.



The two small crakes—Little *P. parva* and Baillon’s *P. pusilla*—are both smaller than a Starling *Sturnus vulgaris*, but size can be confusing and it is not until a Great Reed Warbler *Acrocephalus arundinaceus* or some other swamp-dwelling species hops out onto a neighbouring reed frond that one realises how small they really are; this bird’s head was not much larger than a slim thumb. A word of caution though: the medium-sized Spotted Crake *P. porzana* can look surprisingly small and, on a quick view, can be confused with its smaller relatives, particularly if no other species is present for comparison. Spotted can, however, easily be ruled out here by the lack of white spots on the underparts.

The pool on an Israeli kibbutz which this bird inhabited for one day in April 1976 was covered in algal slime and hence its legs were green, thus introducing the first problem: here was one of the tiny crakes with a green bill (= Baillon’s) and green legs (= Little): we were confused! The legs were so obviously green that it took an hour or so of watching, at ranges down to 1 m, for us to realise that this was due to slime and that the

9. Mystery photograph 26. What is this species? Answer next month.



true colour was dirty pink. Only then were we able to feel wholly confident about the identification, even though the bird exhibited prominent white streaks on wing-coverts and chestnut-brown back, wholly green bill and—less obvious—barred flanks: all four features of Baillon's which distinguish it from male Little. My photograph (plate 213 in vol. 71 and reduced here) shows an adult Baillon's; female Little is, of course, quite different, having buff underparts, but the sexes are alike in Baillon's.

Spotted, Baillon's and Little Crakes will be included in photographic features with texts by D. I. M. Wallace in future issues and he would welcome comments on identification features and also any black-and-white prints suitable for publication. Please send these c/o the editorial address.

R. F. PORTER

Notes

Success of artificial island nest-sites for divers

The breeding success of divers *Gavia* in south mainland Argyll has been very poor for some years (e.g. one young from eight pairs): too low to ensure maintenance of the population level. The poor breeding success is probably largely due to two human activities: fishing and hydro-electric dams. Fishing creates disturbance by the continued presence of people at the breeding lochs, and the trampling of the loch margins. Where there are no islands, this disturbance invariably prevents breeding success. Most hill lochs in south mainland Argyll are reasonably accessible and frequently fished; very few have islands suitable for nesting divers.

Hydro-electric reservoirs are subject to great fluctuations in water level, so that diver nests may be flooded or rendered inaccessible to the birds. Many such lochs are traditional nesting sites of Black-throated Divers *G. arctica*.

In an attempt to solve both problems, I designed a floating nest-site built of heavy-gauge wire netting and empty plastic containers. The rafts (one 2.5 × 2.5 m and the other 3.6 × 1.8 m) were prefabricated from these materials, transported in February/March 1976 to their sites at two adjacent hill lochs near Loch Awe, with the permission and assistance of

10. Artificial island anchored in position on loch, Argyll, July 1976 (*T. D. H. Merrie*)



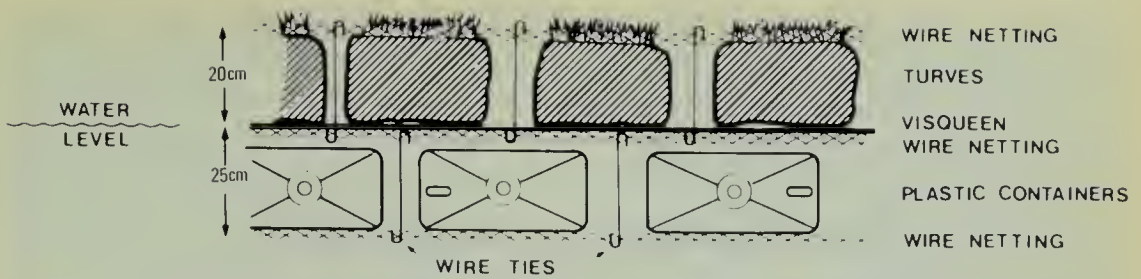


Fig. 1. Diagrammatic view of construction of artificial raft island for nesting divers
Gavia

the landowner, and then topped with thick turves, held down by another layer of netting (fig. 1). The artificial islands were then towed to suitable places in the lochs and anchored. The effect was very realistic (plate 10): both looked like low, mossy islets of the type preferred by divers.

On 8th July 1976, a Black-throated Diver was sitting on one of the islands, on a loch where a pair had nested unsuccessfully on the bank in 1975. Nine days later, the nest was deserted, but a well worn patch indicated that it had been in use for a few weeks. Since 8th July is late for a diver to be sitting on a nest, this was presumably a second attempt (and second attempts are seldom successful). In late June 1977, a Black-throated Diver was sitting on the same island and, in mid/late August 1977, a single well-grown chick was present on the loch. In 1978, both raft islands were used, a pair of Red-throated Divers *G. stellata* rearing two young on the one in the small loch and Black-throated Divers again rearing one young on that in the larger loch. Since only one other young diver was reared by the total of seven pairs in the area, the two artificial islands made a major contribution.

Various grebes (Podicipedidae), ducks and geese (Anatidae), rails (Rallidae), gulls (Laridae) and terns (Sternidae) use artificial islands for nesting, as do Great Northern Divers *G. immer* in the USA (J. E. Mathisen 1969, *Wilson Bull.* 81: 331; J. W. McIntyre & J. E. Mathisen 1977, *J. Wildl. Manage.* 41: 317-319). I do not, however, know of previous cases of Red-throated or Black-throated Divers nesting successfully on such prepared sites. In view of the vulnerability of divers to disturbance (which is increasing in Scotland) and therefore the higher breeding success likely to be achieved by island-nesting pairs, I suggest that the provision of artificial islands should be encouraged. I shall be very glad to advise on their construction and siting.

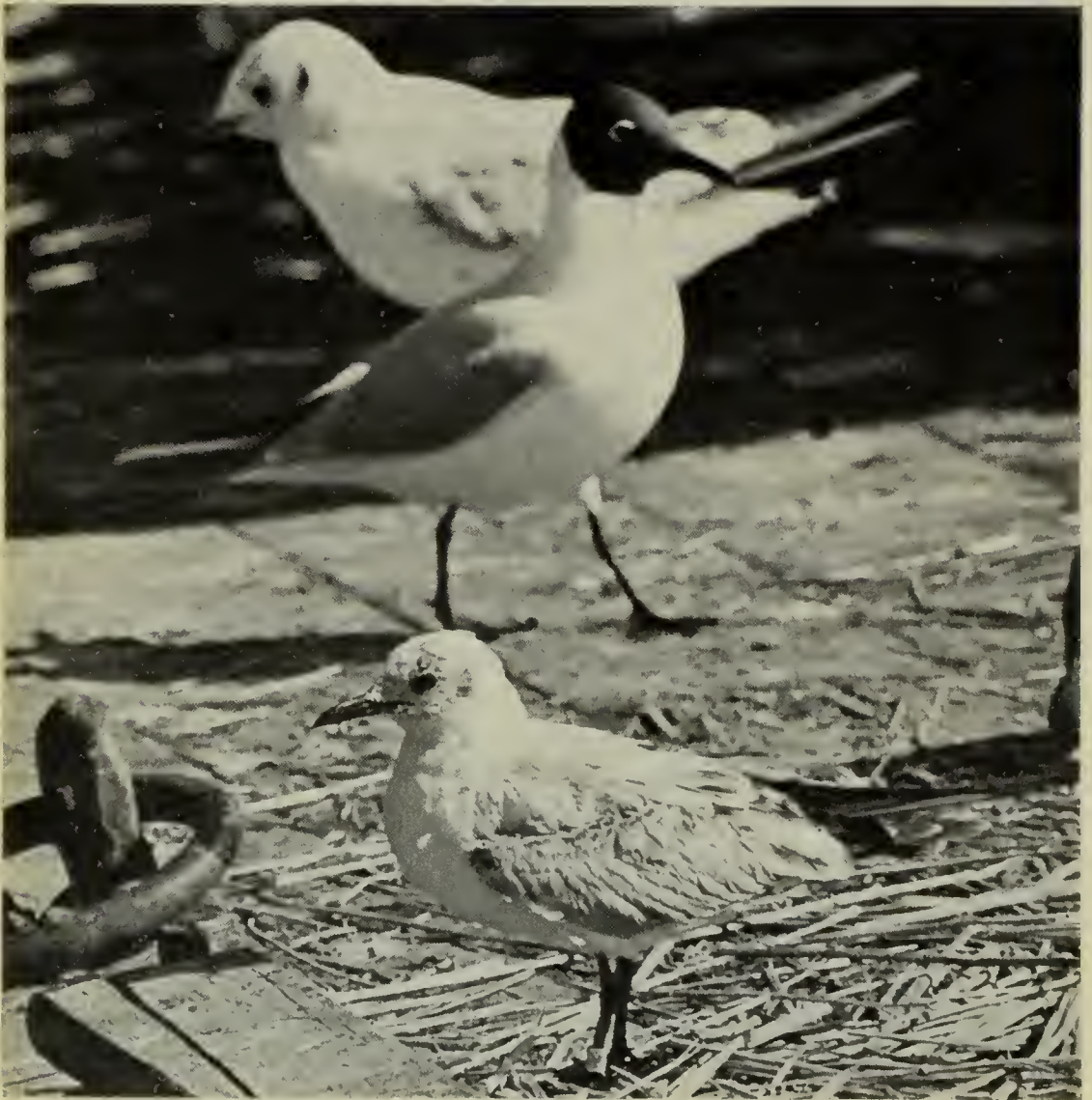
T. D. H. MERRIE

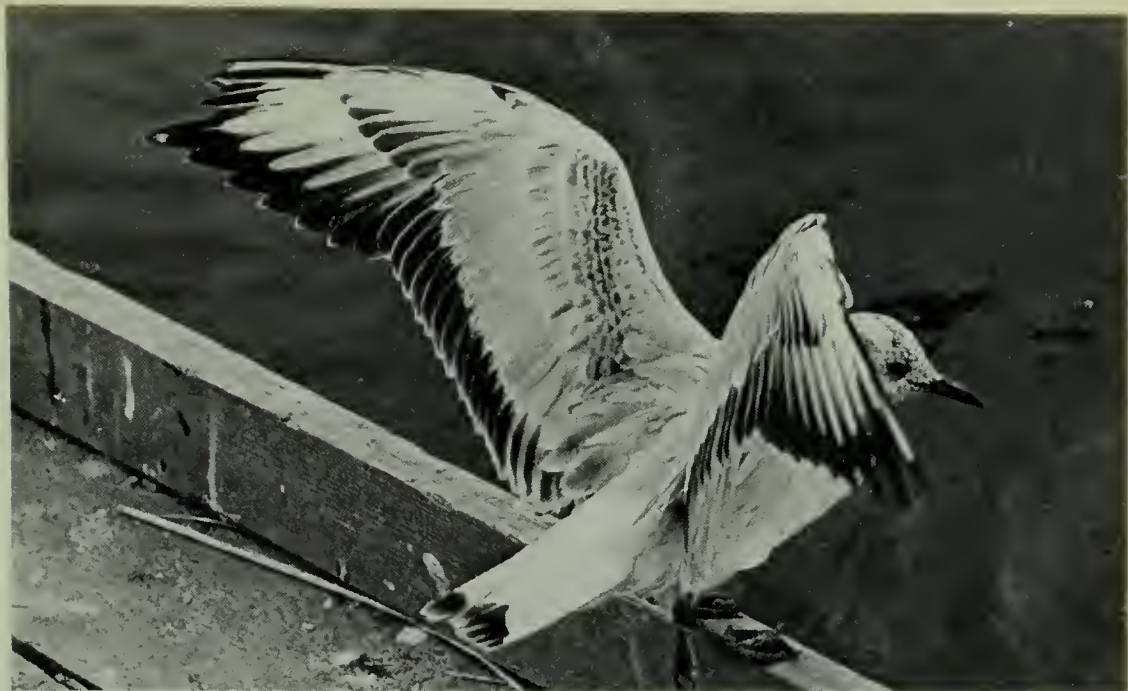
Kirklea, Oyne, by Inch, Aberdeenshire

Identification of an abnormal Black-headed Gull In the first part of a series of papers on the field identification of west Palearctic gulls (*Brit. Birds* 71: 145-176), P. J. Grant gave a very useful summary of the criteria separating, among others, Bonaparte's Gull *Larus philadelphia* from Black-headed Gull *L. ridibundus*. We consider that, on the basis of the characters given in that paper, it should normally be possible to distinguish between the two species in the field; but unexpected problems can be caused by abnormal Black-headed Gulls.

During winter 1977/78, a small gull, for long of obscure identity, was present in central Stockholm, Sweden. Superficially, it looked like a first-winter Black-headed Gull, but was much smaller (almost the size of a Little Gull *L. minutus*; see plate 11) and had a very dark bill, at any distance looking all black, but, when seen closely, actually grey-black with the base only slightly lighter grey. It also flew with noticeably quicker wing-beats than the accompanying Black-headed Gulls. Thus, its appearance fitted well with existing descriptions of a first-winter Bonaparte's Gull, and it was identified as such by several observers. Some details, however, did not fit entirely with Bonaparte's. The under-sides of the primaries seemed not to be noticeably lighter than those of many Black-headed, although this was extremely hard to judge even at close quarters. Also, the carpal-bar on the upper wing was not dark as in Bonaparte's, but resembled that of a Black-headed. Moreover, the legs were very dark—dull greyish with a reddish tinge—and too dark for either Bonaparte's or Black-headed. These points, together with the extremely abraded plumage (see plate 12), led us to suspect an abnormal

11. Abnormal Black-headed Gull *Larus ridibundus* with two normal individuals. Note small size compared with those in background. Sweden, April 1978 (*S. Hedgren*)





12. Abnormal Black-headed Gull *Larus ridibundus* lifting its wings, showing upperwing pattern. Sweden, April 1978 (S. Hedgren)

individual. The problem of its identity, however, remained unsolved until it was subsequently caught and examined in the hand. The bird was then, by direct comparison with skins, identified definitely as an exceptionally small Black-headed Gull. Its wing length was only 260 mm, thus well below the range (280-315 mm) given for the Black-headed by D. J. Dwight (1925, *The Gulls of the World*), but matching the minimum value

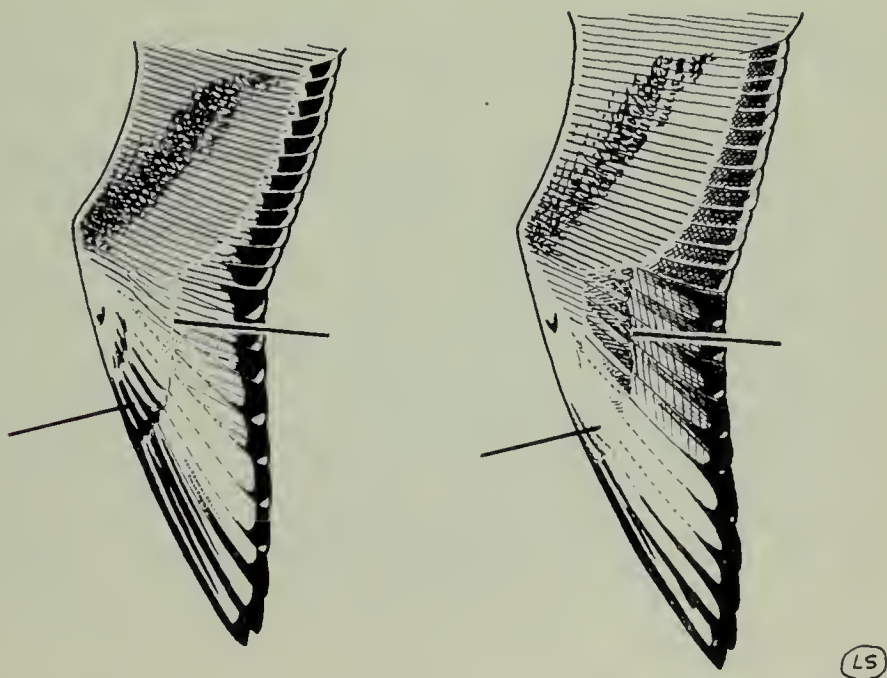


Fig. 1 Typical upperwing patterns of first-winter Bonaparte's Gull *Larus philadelphia* (left) and Black-headed Gull *L. ridibundus*. Lines point to diagnostic characters mentioned in text (L. Svensson)

for juveniles given in *The Handbook*. The other measurements were: tail 92 mm, bill to skull 37, to feathering 29, and tarsus 39 mm. The total length was only 310 mm.

There is, however, a difference in upperwing pattern between younger birds of the two species (only partly mentioned and not stressed by Grant, but to be seen on skins and in photographs) which could prove useful as a field mark. The amount of black on the outer primaries visible on the upper surface varies in Black-headed, and Grant stated that it does too in Bonaparte's (although we have only seen specimens with much black). Regardless of this variation, the *inner hand* pattern seems to be constant and diagnostic. In Black-headed, the outer primary coverts at a distance seem to be white (only very little dark on outermost), contrasting with the mainly dark grey inner coverts. This, combined with much dark grey also on the inner primaries, gives the effect of *dark inner hand* (see fig. 1). In the Bonaparte's, on the other hand, the outer primary coverts have much black, contrasting with the white central and pale grey inner ones. The inner primaries are pale grey except for narrow, clear-cut, blackish, subterminal bands. The combined effect is that of a *light inner hand*. There are instructive photographs of first-winter Bonaparte's Gulls in Fisher & Lockley (1954, *Sea-Birds*), and in Bull & Farrand (1977, *The Audubon Society Field Guide to North American Birds*).

STELLAN HEDGREN and LARS SVENSSON
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Sand Martins drinking and apparently bathing in dew In an earlier note (*Brit. Birds* 59: 499), I described migrant Sand Martins *Riparia riparia* apparently feeding on insects while resting on a closely mown playing-field. An accompanying editorial comment referred to the possibility that the martins were in fact taking drops of dew. On 18th September 1977, at Falsterbo, Sweden, I again saw 100 or more Sand Martins and some Swallows *Hirundo rustica* resting on close-mown turf (this time on a golf-course fairway) in the early morning. I approached to within 10-15 m and saw that the martins, although probably not the Swallows, were definitely taking drops of dew. Further, some crouched right down on to the grass, slightly spread their wings, fluffed out their feathers and shook themselves as if bathing; certain individuals were on the grass for only a few seconds, even when bathing, and soon took off again to join the rest of the flock hovering low over the fairway. Within a few minutes of its arrival, the whole flock took off and joined the thousands of hirundines that were leaving the coast at Falsterbo. P. J. OLIVER

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Unusual House Martin nest-sites Dr D. A. C. McNeil and Frank Clark, in their note on unusual nest-sites of House Martins *Delichon urbica* (*Brit. Birds* 71: 274-275), drew attention to a site where a horizontal bar,



13. Two nests of House Martin *Delichon urbica*, Norfolk, 1978 (Ivor Manklow)

of a bracket supporting a gutter, was used as a base support for a nest, with the gutter forming part of the roof.

Plate 13 shows two similar nests, on a cottage in Edgefield, Norfolk. Broods were successfully raised in each in 1978. House Martins first used these sites in 1975, and again in 1976, two nests being built in each year; but there was none in 1977.

IVOR MANKLOW

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House Martins are clearly versatile in their selection of nest-sites. Future such reports will be collected for possible eventual summary, but not published individually. Eds

Dark wing-bar of Alpine Accentor When reading recent descriptions of British Alpine Accentors *Prunella collaris*, I have been surprised that one of the field characters which I regarded as very striking has been unnoticed or unstressed. Dunnocks *P. modularis* and Alpine Accentors both show variable pale wing-bars (tips of median and greater coverts), but those of the rare species enclose an even more obvious black (or very dark brown) bar. I noted this in *Rare Birds in Britain and Ireland* (1976, page 270), but I can find it described as an important field mark in no other text, although it is illustrated in, for instance, Heinzel *et al.* (1972, *The Birds of Britain and Europe with North Africa and the Middle East*) and shows clearly in David Hunt's photograph of the 1977 Isles of Scilly individual (*Brit. Birds* 71: plate 193). On the other hand, the far less obvious and less diagnostic pale wing-bars receive almost universal mention.

In the detailed plumage descriptions, *The Handbook* notes that:

Adult Alpine Accentors have 'greater	rufous grey-brown and with conspicuous
coverts black, edged widely on basal portion	white spots at tips of outer webs; median

coverts same but without grey-brown edgings and inner feathers with very small buffish white tips'; juvenile and first winter and summer like adults, but greater and median coverts 'Browner and tips buffish, not so white'.

Alpine Accentors are distinctive and seldom give the impression of being 'just big Dunnocks', but the black greater covert bar may prove helpful in the distinguishing of a skulking or briefly glimpsed Alpine Accentor from a brightly plumaged Dunnock. J. T. R. SHARROCK

Fountains, Park Lane, Blunham, Bedford MK44 3NJ

Stonechat hammering snail on wall The note on a Pied Flycatcher *Ficedula hypoleuca* hammering a snail on a road (*Brit. Birds* 71: 133) prompts me to record the following. On 30th October 1977, at Great Linford Gravel Pits, near Wolverton, Buckinghamshire, I watched a female Stonechat *Saxicola torquata* fly to a dry-stone wall and pick up a snail approximately 1 cm in diameter; it briefly banged the snail on the stonework on which it was perched, but very soon abandoned it and flew off.

CRISPIN FISHER

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Distraction display of migrant Wheatear to weasel On 17th August 1977, at Reculver, Kent, I saw two or three migrant Wheatears *Oenanthe oenanthe* feeding in front of me on a stony track. When my dog approached to within about 5 m of them, they flew forward a short distance and resumed feeding. This process continued for almost $\frac{1}{2}$ km, until a weasel *Mustela nivalis* appeared from the lateral vegetation and ran down the track. The nearest Wheatear immediately started a 'broken-wing' distraction display, fluttering along in front of the weasel; it continued this display for well over one minute, although the weasel appeared completely uninterested in it (and was evidently following the scent of something else). Eventually, the weasel returned to the vegetation, at which point the Wheatear stopped its display.

CHRIS HINDLE

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Casting of pellets by thrushes In the hard winter of 1962/63, a large flock of Fieldfares *Turdus pilaris*, with lesser numbers of Blackbirds *T. merula*, Redwings *T. iliacus* and Song Thrushes *T. philomelos*, came daily to feed in a clump of hawthorns *Crataegus monogyna* near my former house in Berkshire. The snow-covered ground beneath the trees rapidly became speckled with what I at first assumed to be normal faecal droppings, but which on close examination proved to be cylindrical extrusions of a compressed, dryish mixture of fruit pulp, skins and seeds. As these quickly oxidise to a rusty brownish colour, they are much less conspicuous in the absence of snow, but since this initial discovery I have always been able to find specimens wherever Fieldfares and other thrushes have been feeding en masse. Although I suspected from the beginning that these were orally ejected pellets, it was only in 1976 and 1977 that I could confirm this: on three occasions I have seen Blackbirds eject them—after

feeding on hips *Rosa* (twice) and on berries of ivy *Hedera helix* (those from hips remain tomato-coloured and conspicuous for many days); the average size of pellets strewn around my garden pool in December 1977 was 30 mm \times 8 mm. W. H. Hudson (1900, *Nature in Downland*, chapter 12) wrote of the Mistle Thrush *T. viscivorus* eating berries of yew *Taxus baccata*: 'When a bird, with incredible greediness, has gorged to repletion, he flies down to a spot where there is a nice green turf and disgorges, then, relieved, he goes back with a light heart to gorge again and then again.' Hudson described the ground around as strewn with 'little masses or blobs of disgorged fruit', one of which contained 23 whole berries.

W. D. CAMPBELL

Ticknell Corner, The Slade, Charlbury, Oxford

Great Tit climbing and descending tree-trunk On 27th November 1977, while leading a group of 20 students to Malham Tarn and Woodlands, West Yorkshire, we observed a Great Tit *Parus major* climb the trunk of a beech *Fagus sylvatica* in the corkscrew manner typical of a Tree-creeper *Certhia familiaris*. It then turned and descended the smooth trunk for at least 2 m head first, pausing on several occasions and turning its head as if to swallow food extracted from the trunk. I had assumed this mode of descent to be exclusive to nuthatches *Sitta*. RON FREETHY

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Dr C. M. Perrins has commented that Great Tits 'do go up and down tree trunks, but not very commonly'. A very similar observation was recorded by W. D. Ryder (*Brit. Birds* 48: 234). EDS

Review

RSPB Guide to Birdwatching. By Peter Conder. Hamlyn, London, 1978. 176 pages; 28 colour and many black-and-white plates; many line-drawings. £2.50.

Nowadays, there is almost a plethora of birdwatching guides aimed at the many newcomers to the hobby. With well chosen photographic illustrations and clear, instructive line-drawings by Norman Arlott, this conveniently sized, well bound hardback immediately creates a good impression. Deeper delving shows that it covers an enormous range of topics in a style likely to foster interest and inspire development. Perhaps the first revised edition could include rather more about—and a map showing the locations of—those wonderful training grounds, the bird observatories, but there are few other obvious omissions.

An earlier generation of birdwatchers owed their expertise to the grounding given by the late James Fisher's *Watching Birds* (1941, revised by J. J. M. Flegg 1974). Peter Conder and this *RSPB Guide* seem likely now to have equal influence on a new generation. With its membership exceeding a quarter of a million, the RSPB is a powerful force in today's ornithology. Peter Conder has, with this excellent book, provided that army of observers with training manual, campaign plan and code of ethics combined. He has not been afraid to write in the first person and leaven his advice with examples from his own experience. For a birdwatcher, a good fieldguide comes first; it is debatable whether a pair of binoculars or this book should come second. Its influence should be felt for years

to come. Buy one for the beginner you know.

In his Introduction, Peter Conder remarks that: 'There has been no birdwatching "leader" recently like the late Dr David Lack who inspired other birdwatchers to study and think more about such subjects as territory, life history, clutch size, migration, habitat selection, population and so on.' There is now.

J. T. R. SHARROCK

Letters

Thermal soaring of raptors I read Dr C. J. Henty's paper on thermal soaring of raptors (*Brit. Birds* 70: 471-475) with interest, and not a little surprise. It has long been known by ornithologists that raptors use thermals for soaring, and, likewise, it has been known by meteorologists that thermals depend for their existence upon surface heating. I was surprised to find that no-one had previously related these two facts.

The attempt to relate the lapse rate in the first 1.5 m of the atmosphere to the temporal increase in soaring birds is unlikely to be successful, as ground temperatures vary widely according to the thermal capacity of the surface. The air temperature, however, is a much more uniform parameter. Although the formation of thermals depends upon a marked temperature lapse rate near the earth's surface, it is the degree of instability in the free air that determines whether formation is possible, and also the depth of the thermals. Certainly, in climates where regular intense heating occurs, thermals are frequently formed during sunny mornings, but the lapse rate in the lower atmosphere can be such that surface heating will not produce any thermals, although, to an observer, there may be no apparent difference. Such instances may occur in more stable airmasses, where thermal formation will not take place, or be considerably delayed. The rise in air temperature is merely the trigger that releases instability already present in the atmosphere.

The more erratic behaviour in the afternoon is likely to be partly related to the fall in temperature after the diurnal maximum, but more especially to the reduced effect of thermals as the rising air mixes with its cooler environment.

N. ELKINS

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Field characters of Baird's Sandpiper Several recent notes (*Brit. Birds* 71: 78, 417, 418) have commented on the appearance of Baird's Sandpiper *Calidris bairdii*, including the astonishingly clear wing-bar shown in T. E. Bond's photograph (71: plate 154). That same photograph, however, also shows well the black lower back and tail that is characteristic of this species. The 'dark width' of this area is so obvious (and the white lateral coverts to the rump and tail correspondingly indistinct) that I have always found it eyecatching and consider it diagnostic of Baird's. There is an excellent drawing of this plumage of the lower back and tail in *The Handbook* (vol. 4, p. 267).

D. I. M. WALLACE

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Hoopoe breeding records in Britain I am grateful to Richard C. Stone (*in litt.*) for pointing out the following error. In my 'Scarce migrants in Britain and Ireland' paper on the Hoopoe *Upupa epops* (*Brit. Birds* 62: 179), I stated: 'In the ten years [1958-67] there was only one authenticated breeding record, in Kent in 1959, but a pair summered and breeding was suspected in Bedfordshire in 1964.' In fact, this 1959 Kent record referred only to summering: 'At least one bird, and possibly a pair, present in a N.W. Kent village from early June to July 29th' (*Kent Bird Report* 8: 30). I perpetuated my error in *The Atlas of Breeding Birds in Britain and Ireland* (1976), when I stated (page 268) that there had been 'another small upsurge in the 1950s, with four breeding records': this should have been three breeding records.

J. T. R. SHARROCK

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Did the Tree Pipit formerly nest in Ireland? The distribution map of the Tree Pipit *Anthus trivialis* in *The Atlas of Breeding Birds in Britain and Ireland* (1976) shows that it nests throughout most of mainland Britain, north to southern Caithness and northern Sutherland and west to Skye, Mull, Islay, the Kintyre peninsula, the Llyn peninsula, Pembrokeshire and eastern Cornwall: in some of these places it is quite common in open woodland, parkland and scrub with scattered trees. It is also widespread in Europe, from northern Spain to northern Norway and Sweden (Voous 1960). In contrast, there is no published record of it ever having attempted to breed in Ireland, and in only six years (1914, 1932, 1959 and 1974-76) have one to three been noted singing in summer (Ruttledge 1966; *Irish Bird Reports*). Other species breed in Britain, but not in Ireland. These, however, are confined to relatively restricted areas of Britain (e.g. Reed Warbler *Acrocephalus scirpaceus*, Nightingale *Luscinia megarhynchos*), are mainly sedentary (e.g. Tawny Owl *Strix aluco*) or are both (e.g. Nuthatch *Sitta europaea*). Presumably, those in the last two groups did not reach Ireland before that island was cut off by the sea—just as Short-toed Tree-creepers *Certhia brachydactyla* apparently did not reach Britain before the formation of the English Channel—and subsequent potential colonists were unable to establish themselves in the island community, other species having occupied both their own and the absentees' niches. The Tree Pipit, however, is the only widespread long-distance migrant to display this strange distribution pattern: other woodland migrants breed occasionally or in small numbers in Ireland (e.g. Redstart *Phoenicurus phoenicurus*, Wood Warbler *Phylloscopus sibilatrix*).

On islands, 'fewer species with broader niches . . . exclude a greater number of specialists' (Lack 1969) and, therefore, the Meadow Pipit *A. pratensis* may have occupied Tree Pipit habitat in Ireland, reducing the opportunities for colonisation by the Tree Pipit. One other possible explanation, however—which I believe deserves consideration—is that Tree Pipits (as well as other woodland and woodland-edge nesters perhaps including even woodpeckers at one time) may have bred in Ireland

until their populations were fragmented into unviable pockets and then eliminated by the wholesale felling of the forests. By the end of the 18th century, most of Ireland is reputed to have been left almost devoid of trees and even saplings (Kee 1972). Later, the destruction became even more complete. According to Mitchell (1976), by about 'AD 1850 we see a ruined landscape, almost destitute of any woody growth.' 'The countryside must have presented an extraordinary appearance'; fuel was in such short supply that, apart from within the oases of the walled and guarded demesnes and around farmers' houses, 'there was nothing, not a tree, not a bush, to break the view of the bare landscape'. Even the landowners' wooded gardens later succumbed: 'The woods that survived this cutting enjoyed only a brief respite before they vanished in World War I, and when that was over 200,000 acres (81,000 ha) of woodland had disappeared, and less than half of one per cent of Ireland was covered by forest.'

To quote Mitchell further: 'Despite the set-backs of two world wars, the annual rate of planting has [now] been pushed up to 30,000 acres (12,000 ha) per annum.' It seems reasonable to conclude (1) that Tree Pipits and other woodland and woodland-edge species may have bred in Ireland before deforestation, and (2) that reafforestation of the Irish landscape is now such that we should be prepared to record recolonisation by some of these species.

I am grateful to Professor G. M. Dunnet for his criticism of a draft of this letter; and to John Wilson for drawing my attention to Mitchell (1976).

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Further range expansion by Citrine Wagtail Following the intriguing story of a male Citrine Wagtail *Motacilla citreola* feeding young in Essex (*Brit. Birds* 71: 209-213) and a report of breeding in Sweden (*Brit. Birds* 70: 496), it is of interest that there is evidence of range expansion in the USSR. I offer a visual summary of this (fig. 1) and my translation of a note by M. E. Matveyenko (1977):

'At the end of the 1920s, the western limit of the breeding range ran through the territories of Ryazan, Tambov, Penza and Gorky regions and Tartary. By the beginning of the 1950s, the species had penetrated into Moscow Region, gradually extending its range westwards. In the Ukraine, it was recorded as a rare vagrant in Kharkov Region. Citrine Wagtail was first noted in Sumy Region (Ukraine) on 5th March 1970. On 15th May 1976, a nesting pair was discovered on a small marshy meadow at Bakalovshchina (Sumy District). Feeding of young was observed from 29th May, and the nest, from which four young fledged, was found on 8th June.

'To judge by this record, and also the finding of a nest in the summer of 1976 in Kharkov Region, as well as the presence of the species in Belgorod Region, it may be concluded that

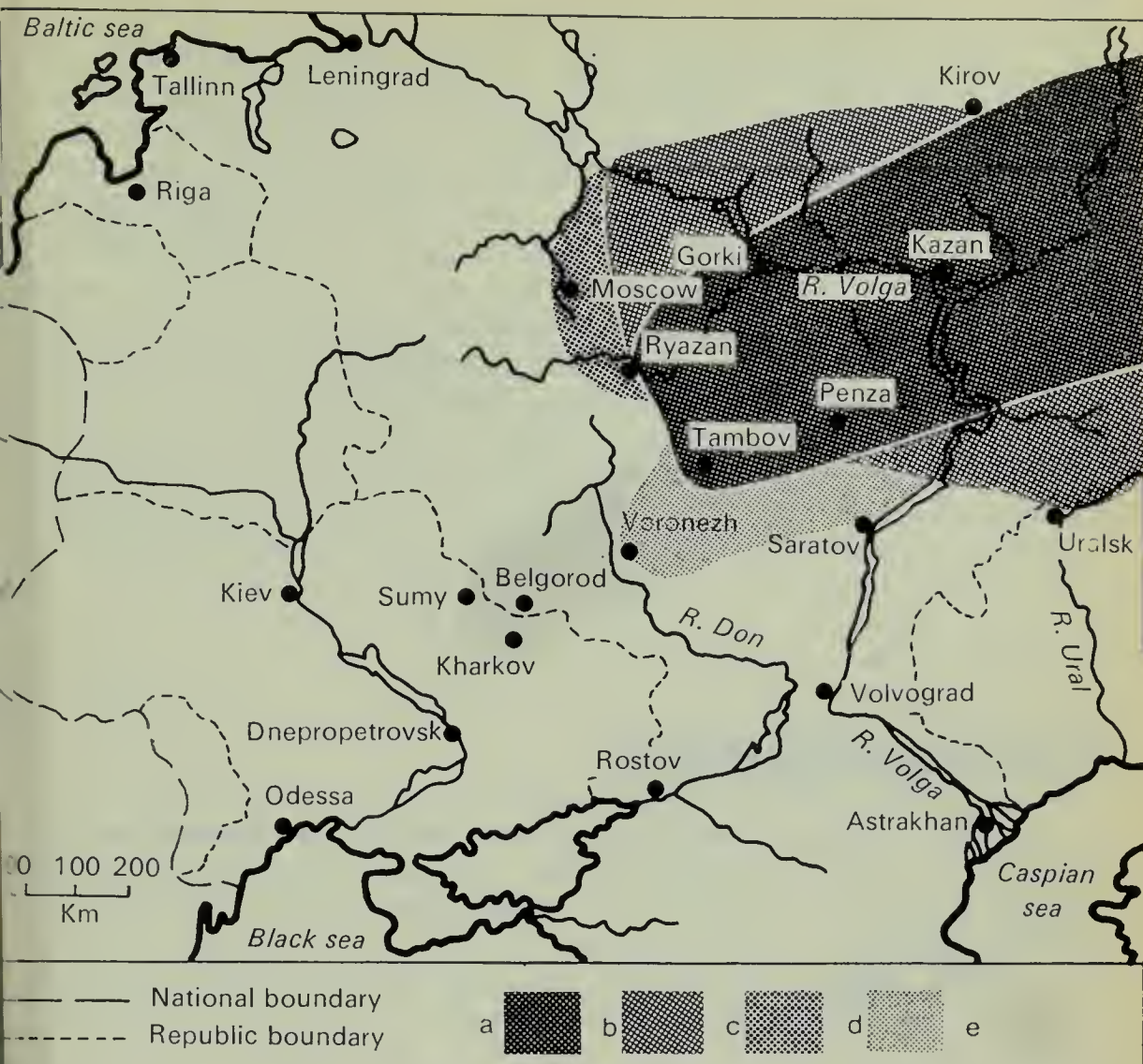


Fig. 1. Range expansion of Citrine Wagtail *Motacilla citreola* in USSR. (a) 1920s (Matveyenko 1977); (b) late 1920s (Flint *et al.* 1968; Ivanov 1976); (c) early 1950s (Matveyenko 1977); (d) early 1960s (Wilson 1976); (e) 1976 (Matveyenko 1977)

the Citrine Wagtail is engaged upon a southwesterly expansion of its breeding range.'

I wish to thank R. J. Prytherch for permission to use his map outline.

MICHAEL WILSON

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 WILSON, M. G. 1976. Ornithological observations from the northern Voronezh Region, USSR. *Bristol Ornithology* 9: 127-152.

Recent west Palearctic records of Citrine Wagtail In our account of a Citrine Wagtail *Motacilla citreola* feeding young wagtails in Essex (*Brit. Birds* 71: 209-213), Dr Simon Cox and I considered that an old reference to its occurrence in Israel could not be substantiated. J. Swaab (*in litt.*) has since provided details of several records from Elat, Israel, in March 1977, and March and April 1978, suggesting a small, regular passage through the Middle East from a probable wintering area in northeast Africa. This is supported by further occurrences (March, April and September 1977; January and March 1978) in the United Arab Emirates (M. A. Hollingworth *in litt.*). In addition, an adult male was seen on 29th April 1978 at Keramoti, Nestos Delta, Greece (V. Lister *in litt.*), and an adult female on 3rd May 1978 at Kulu Golu, Central Plateau region, Turkey (D. J. Holman *in litt.*). The latter is the second spring record for Turkey.

TIM INSKIPP

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Announcements

Second International Congress of Systematic and Evolutionary Biology ICSEB-II will be held at the University of British Columbia, Vancouver, Canada, during 17th-24th July 1980. Anyone interested in receiving an information circular in the spring of 1979 should write to Dr G. G. E. Scudder, Department of Zoology, The University of British Columbia, 2075 Wesbrook Mall, Vancouver, British Columbia V6T 1W5, Canada.



Past winners of this competition have been Michael C. Wilkes (1976) and Peter Lowes (1977). Their prizes (cheques for £100 and engraved salvers) were presented at press receptions in London by Sir Peter Scott and Mrs Joyce Grenfell. The 1978 award will be marked by a similar ceremony.

The closing date for submissions of entries for the third of these annual awards is 31st January 1979. For this 1978 competition, only colour transparencies are eligible. Up to three transparencies, each taken during 1978, may be submitted by each photographer. They will be judged on interest and originality, as well as technical excellence. Preference will be given to photographs taken in Britain or Ireland, but those of species on the British and Irish list taken elsewhere are also eligible. A brief account (not more than 200 words) should be enclosed with each, giving the circumstances in which obtained, the method used, technical details

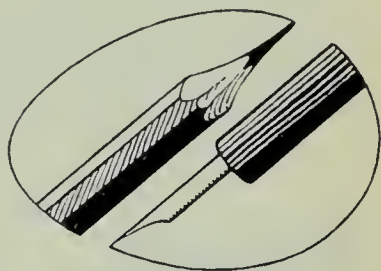
(focal length of lens and make of camera and film), locality, date and photographer's name and address. Transparencies will be returned only if accompanied by a suitable stamped and addressed envelope.

Transparencies should be clearly marked 'Bird Photograph of the Year' and sent to the editorial office at Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

Best recent black-and-white bird-photographs As previously announced (*Brit. Birds* 71: 458), the closing date for submission of prints for the twentieth annual selection is 31st March. We hope that this year's entry will be even larger than that in 1978, when 47 photographers submitted 214 prints. In 1979, as in 1978, details of the photographs selected and of the winning photographers will be included in a special press handout released simultaneously with publication in *British Birds*.

The following details should be written on the back of each print: photographer's name and address, species, county (or country, if taken abroad), month, year, and technical details, such as make and size of camera, make and focal length of lens, type of film material, exposure and approximate distance from the subject. Prints should be addressed to 'Best recent work', Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

Bird Illustrator of the Year In the first annual competition for the title 'Bird Illustrator of the Year', amateur and professional artists are invited to submit four line-drawings suitable for reproduction in *British Birds* (pen-and-ink or scraper-board, but not pencil or wash). When reduced for publication, the sizes will be (width \times depth in cm) 12.2 \times 13.7, 10.9 \times 4.6 and 5.3 \times 4.0; but drawings should be 'half-up' ($1\frac{1}{2}$ times) or double these reproduction dimensions: each set of four drawings should include at least two of the three sizes. Subjects should be of birds which have been recorded in the west Palearctic (Europe, North Africa and the Middle East).



The four judges of the competition will include three members of the Society of Wildlife Artists, Dr Eric Ennion, Robert Gillmor and D. I. M. Wallace, together with the managing editor of *British Birds*, Dr J. T. R. Sharrock.

The winner will receive £75 and an inscribed salver, and the two runners-up will receive £40 and £25. All three artists will also be invited to attend the award presentation at a press reception in London, where a selection of the drawings will be displayed.

Entries will remain the copyright of the artists, but are accepted on the understanding that they may be reproduced free in or on the cover of *British Birds*. If accompanied by a suitable stamped and addressed envelope, all drawings will be returned to the artists, but any selected for possible use in *British Birds* may be retained for up to 12 months after the award presentation.

Each drawing must be marked clearly on the back with the artist's name and address (and date of birth if aged under 21, see 'The Richard Richardson Award', below), the identity of the species and any other relevant information about the illustration. The closing date will be 31st May 1979; the set of four drawings should be sent to 'Bird Illustrator of the Year', c/o Dr J. T. R. Sharrock, Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

The Richard Richardson Award To encourage new bird artists, a special award (value £50) will be presented for the best work submitted for the 'Bird Illustrator of the Year' competition (see above) by an artist aged under 21 years on 31st May 1979.

This award, named in memory of the well-loved Norfolk ornithologist and bird artist R. A. Richardson who died in 1977 (*Brit. Birds* 70: 541-543), will, we hope, be presented annually. It will be financed by a Richard Richardson Award Fund which is at present being established by combining 'The Richard Richardson Appeal' (secretary Miss E. Forster, The Double House, Wiveton, Holt, Norfolk) and the similar appeal organised by the Norfolk Ornithologists' Association (secretary Peter R. Clarke, Aslack Way, Holme-next-Sea, Hunstanton, Norfolk). The editorial board of *British Birds* will be trustees of this combined fund.

The rules for entry are exactly the same as for 'Bird Illustrator of the Year' and, indeed, entries by persons under 21 will automatically be considered for both awards.

Request

Mute Swans with yellow collars or yellow rings As part of a study of the population structure and dynamics of wild Mute Swans *Cygnus olor* in the Outer Hebrides, 385 were caught and marked on the Uists in the first half of August 1978. All the fully grown swans were marked with 8-cm yellow neck collars, with a three-digit combination engraved in black. The digits, which should be read upwards, are repeated three times vertically on the collar, and consist of two letters and a number. About 100 cygnets were also marked, using traditional large darvic leg rings, again with black figures on a yellow background. Reports of sightings in the Hebrides or elsewhere will be gratefully received (even if the collar combination was not read completely) by Chris Spray, c/o Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.

News and comment

Peter Conder and Mike Everett

SOC Conference The Scottish Ornithologists' Club held its thirty-first annual conference at the Marine Hotel, North Berwick, on 27th-29th October 1978. This

marked a welcome return to an autumn conference, using the venue which had proved so successful in the previous January. Certainly, North Berwick has

much to commend it as a centre for a weekend's birding, so what could be better than assembling there to enjoy that uniquely Scottish blend of conviviality and serious ornithology for which SOC conferences have long been famous, with good birdwatching in superb weather thrown in too? On the first morning, we were told about various aspects of gamebird ecology by Dr Art Lance, Dr Dick Potts and Dr Bob Moss, the last speaker convincing most of us that gamebirds *are* real birds after all, and that being a cock Capercaillie could be good fun, once you had a thick enough skull to be 'bird A' at the lek. On Sunday morning, Scottish topics took over, with talks on Perthshire Pied Wagtails by Bob McMillan, waders on rocky shores by Stan da Prato and the Beaulieu Firth Canada Geese by Alan Walker. Gordon Hollands rounded off the morning with his film 'Halcyon'. At the AGM, the Club said farewell to its outgoing President, Andrew Macmillan, and welcomed in his place Valerie Thom.

The now traditional *British Birds* mystery photograph competition attracted a lot of attention, and some interesting arguments. The birds in all five photographs were correctly identified by ten of the 60 entrants: David Bates, William R. Brackenridge, Alan Brown, Dr James Cadbury, Roy Dennis, Mike Everett, Angus Hogg, Iain H. Leach, Peter Robinson and Donald Watson. In a draw, Roy Dennis won the first prize of a bottle of champagne. Ian Gray, the youngest entrant, who correctly identified four of the five, was awarded a year's free subscription to *British Birds*.

RSPB bird reserve list Anthony Chapman, Assistant Reserves Officer at the RSPB, has been diverting himself by working out how hospitable the RSPB's reserves have been to the species on the British and Irish list. Of the 200 regular breeding species (discounting contemporary ferals such as Mandarin and Egyptian Goose) all but 26 are known to breed on RSPB reserves, or have done so within recent years. The absentees seem to be: Black-throated Diver, Slavonian Grebe, Black-necked Grebe, Storm Petrel, Leach's Petrel, Greylag Goose (native), Golden Eagle, Goshawk, Honey Buzzard, Curlew, Swift, Wryneck, Woodlark,

Golden Oriole, Fieldfare, Redwing, Firecrest, Cirl Bunting and Snow Bunting. The last records of lost breeders were: Black-necked Grebe (Loch Winnoch 1964), White-tailed Eagle (Handa 1877, lost to Britain 1916), Spotted Crake (Minsmere 1965), Kentish Plover (Dungeness 1943, lost to Britain 1956), Stone-curlew (Minsmere 1969), Wryneck (Minsmere 1953), Woodlark (Minsmere 1965) and Great Auk (Papa Westray 1813). RSPB reserves have provided isolated breeding records for Little Gull, Black Tern, Snowy Owl and Bluethroat, which brings the grand total of birds known to have bred on RSPB reserves to 178.

Lapland Buntings Following the discovery of Lapland Buntings *Calcarius lapponicus* nesting in Scotland in 1977, this species is now added to Schedule One of the Protection of Birds Acts, 1954 to 1967. To remind you what this means: anyone convicted of killing, injuring or taking the bird, or of damaging or destroying its nest and eggs, or wilfully disturbing the nest—or attempting to do any of these things—faces a maximum fine of £500 or a term of imprisonment not exceeding one month for a first offence, or three months for a second or subsequent offence, or both. Thus, the Lapland Bunting now moves from the list of normally protected birds onto a schedule where protection is reinforced by special penalties.

'The Birds of Tring Reservoirs' Bird-watchers in the Greater London area, especially those north and west of the metropolis, will be interested to hear of this new booklet. It includes a map, details of visiting arrangements and an annotated check-list; it is available, price £1.00 (including postage), from the Hertfordshire Natural History Society, 6 Castle Hill, Berkhamsted, Hertfordshire.

Slimbridge helps the visually handicapped We were pleased to hear that in July a new kind of nature trail for the visually handicapped was opened by the Wildfowl Trust at their Slimbridge headquarters. Parties can book in advance and on arrival are given an introductory talk in which stuffed birds, wings, and so on are used to convey the size and shape of various wildfowl species. On their walk around, the visitors can orientate themselves by

using a specially made relief map and find out about the exhibits (and the birds they hear) by means of a pre-recorded commentary on cassette. If the scheme proves successful, it may be introduced at Trust centres elsewhere.

Lundy visit The Lundy Field Society's special annual day visit to the island will take place on Saturday, 9th June 1978. The boat leaves Ilfracombe at 10.30 BST and should anchor off Lundy at 12.15, allowing four or five hours ashore. The return fare is £5. Book early to avoid disappointment: write to A. J. B. Walker, 29 Nassau Road, London SW13 9QF.

Birdwatching in Mallorca It is not very often that, when you want to do birdwatching abroad, you can be spoon-fed birds and birdwatching places. But this is what Eddie and Pat Watkinson try to do for birdwatchers visiting Mallorca in spring. Nominally, Eddie is the RSPB's representative (honorary), but he tries to ensure that all birdwatchers visiting the island enjoy their birding. He is usually resident in Mallorca from February to the end of June and, during this spring period, he is prepared to answer letters and enquiries providing an addressed envelope with either a first or second class UK stamp is enclosed. He can also help in other ways, such as arranging car hire locally at a 15% discount. From March to the first week in July, informal meetings for birdwatchers are held in a local hotel and slides or films may be shown. These gatherings are attended by birdwatchers from all over Europe and, says Eddie, are very beneficial for the exchange of information. Eddie Watkinson's postal address from February to June is Apartado 72, Pto Pollensa, Mallorca, Spain.

'Bird's Eye View' Mention was made in November (*Brit. Birds* 71: 551) of this new Maltese journal. We were pleased to see from the second issue (July 1978) that the Malta Ornithological Society is campaigning hard to protect birds of prey passing through the island on passage, when they are still more likely to be shot than to carry on towards North Africa. A leaflet and a poster, aimed mainly at teachers and other educators, are available, giving information on raptors and their life-

histories; of more immediate impact was a circular issued by the Maltese Education Department deploring the use of stuffed specimens in schools and, later, total prohibition of their use, backed up by the advice that the MOS would gladly supply information and replacement material on bird appreciation. Another splendid MOS effort involves the use of television: they have arranged to have educational 'caption cards' on birds and their conservation inserted between programmes. Things are certainly on the move at last in Malta, and the MOS deserves our hearty congratulations for all it has achieved.

Langstone Harbour In the winter 1978 issue of *Birds*, the RSPB announced the acquisition of an important new reserve, 550 ha of marshes and mudflats at Langstone Harbour, Hampshire. The great value of the harbour has been known for many years and, indeed, the Hampshire and Isle of Wight Naturalists' Trust already runs the local nature reserve at Farlington Marshes, which adjoins the new RSPB reserve. With peak populations of 90,000 waders (including approximately 1,200 Oystercatchers *Haematopus ostralegus*, 1,200 Grey Plovers *Pluvialis squatarola*, 900 Black-tailed *Limosa limosa* and 1,000 Bartailed Godwits *L. lapponica*, 2,000 Knots *Calidris canutus* and 30,000 Dunlins *C. alpina*) and 20,000 wildfowl (including 1,500 Wigeons *Anas penelope* and 6,000 Brent Geese *Branta bernicla*) using the harbour in winter, and the many development and recreational pressures on the English south coast, this must be one of the most important acquisitions made by the RSPB in recent years. Visiting arrangements will be announced in due course; meanwhile, good views of birds can be had from the public road where it crosses the causeway between Langstone and Chichester.

Personalities We were pleased to hear that the Bishop tradition continues in Norfolk at Cley, where Billy Bishop has been replaced on his retirement by his son Bernard; a special appeal is being mounted to give Billy a suitable retirement present: Peter Stevens, Norfolk Naturalists' Trust, 72 Cathedral Close, Norwich NR1 4PF, would be glad to receive your donations . . . Five British conservationists were honoured at the Fourteenth General

Assembly of the International Union for the Conservation of Nature and Natural Resources (IUCN) in Adhkhabad, USSR, in September/October: Robert Boote, Director of the Nature Conservancy Council, was elected a Vice President of IUCN, while, among the first 13 honorary members to be appointed on a world basis, were Phyllis Barclay-Smith, Secretary General of ICBP; Max Nicholson, Chairman of Land Use Consultants, former Director General of the Nature Conservancy and former Senior Editor of *British Birds*; Dr Duncan Poore, former Director of the Nature Conservancy and Scientific Advisor to IUCN; and Dr Barton Worthington, Scientific Director, International Biological Programme Publications Committee . . . Finally, mention must be made of our 'Personality' this month, Oscar Merne (see pages 28-30), who came very close indeed to appearing in an obituary instead. While flying with an Irish Army Air Corps pilot in a Cessna, censusing wildfowl on the Shannon, Oscar was involved in a miraculous escape. Swerving to avoid a 'bird strike', the plane somersaulted several times before flying into 12 m of water in the Shannon itself. Somehow, both Oscar and the pilot managed to get out of the aircraft seconds before it sank (it was upside down at the time and the doors were jammed) and were able to swim ashore with little more than minor facial injuries.

Bardsey Light experiment Bird-deaths at some lighthouses during migration periods are well known and some success has been had in minimising these

by floodlighting the lighthouse towers. On Bardsey, Gwynedd, however, a new technique is being tried: after discussion with Bardsey Bird and Field Observatory and the RSPB, Trinity House has erected two 500-watt quartz-iodide lamps on a 5-m gantry some 150 m from the lighthouse itself, the aim being to attract night-migrants into the safety of bushes and undergrowth. The first news of this experiment is the successful attraction of some 4,000 birds away from the lighthouse on 3rd November 1978; let us hope that this is the first indication of long-term successes. This is one project we shall watch with interest.

'Ireland's Wetlands and their Birds'

Everything that is known about the birds of Ireland's wetlands, including the results of the concentrated fieldwork for the Wetlands Enquiry in 1971-75, has been drawn together, analysed in detail and attractively presented with maps, graphs and photographs in this new Irish Wild-bird Conservancy book by Clive D. Hutchinson. The whole of Ireland is covered, with accounts of individual areas and of Ireland's special birds, such as the 16,000 Black-tailed Godwits *Limosa limosa* of the Shannon Estuary and the 5,000-6,000 Goldeneyes *Bucephala clangula* of Lough Neagh. Publication will be in March 1979.

Readers of *British Birds* can obtain this book at the special republication price of £3.50 (post free), by placing an advance order now and sending a cheque or postal order to the IWC, c/o Royal Irish Academy, 19 Dawson Street, Dublin 2.

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

K. Allsopp and S. C. Madge

These are largely unchecked reports, not authenticated records

This report covers October and the first part of November; except where otherwise stated, all dates refer to October. The weather was dominated by anticyclones, especially the Azores anticyclone; although this brought light winds, these were predominantly westerly and not

conducive to immigration from the Continent. When the centre of high pressure moved over western Europe, some influxes did occur on the resulting east and southerly winds. The first sizeable arrival of winter thrushes came on 12th to 14th, with 5,000 **Redwings** *Turdus iliacu*

on Fair Isle (Shetland), flocks of thousands at Low Hauxley (Northumberland) and 150 at Dungeness (Kent). The most exciting movement was of **Short-eared**



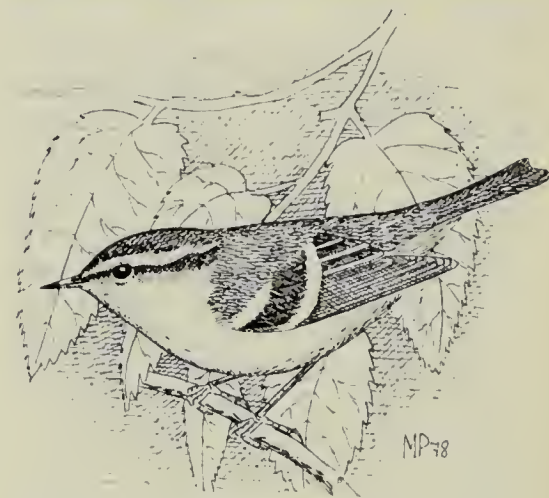
Owls *Asio flammeus*. Fair Isle reported 14 on 12th, 30 on 15th and 25 with ten **Long-eared Owls** *A. otus* on 16th. On the Scottish east coast near Aberdeen, 20 were seen on 15th and, farther south, Northumberland watchers reported ten arriving from the sea with 20 subsequently seen along the coast. Further records came from Filby Brigg (North Yorkshire), where there were four on 14th and two on 15th, while in Devon and Cornwall an influx was noted during the following weeks. A further small influx of owls occurred on 28th and 29th along the East Coast. The distinctive flight pattern and shape can be discerned far offshore, giving plenty of time for speculating which of the two species it is. Unfortunately, quite often, the birds are noted as Short-eared without considering the alternative Long-eared.

During a long period of light westerlies in the latter half of October, **Fieldfares** *Turdus pilaris* and **Redwings** could be heard inland passing over at night, but it was not until 26th, when a weather front remained stationary along the East Coast for two days, opposing these flights, that high numbers were grounded at coastal observatories. Fieldfares totalled 8,000 at Spurn Point (North Humberside) and 5,000 at Holy Island (Northumberland) on 26th, and 3,000 at Sandwich Bay (Kent) on 27th, with Redwing numbers being 3,000 at Spurn Point on 26th and 10,000 at Dungeness on 27th.

Quality rather than quantity

A dearth of small passerine migrants was commonly reported from most observatories, with many 'flat' days. Of interest,

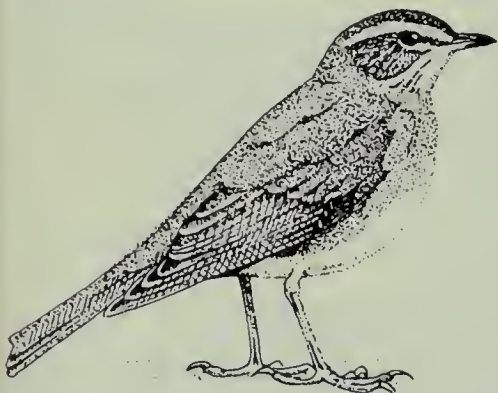
however, was the arrival of **Firecrests** *Regulus ignicapillus*, especially in western areas. Totals of 53 were found in southern Ireland and 30 in the Channel Islands, and good numbers on the Isles of Scilly in the first half of October. Other reports included 30 at Prawle Point (Devon) on 12th, nine at Portland Bill (Dorset) on 29th and one as far north as Walney Island (Cumbria) on 6th. Very few **Barred Warblers** *Sylvia nisoria* were found and **Red-breasted Flycatchers** *Ficedula parva* were also scarce, with only ten reports received. Surprisingly, **Yellow-browed Warblers** *Phylloscopus inornatus* became



commoner during the period, with 21 reports scattered around the country including three inland, at Ottery St Mary (Devon) and Sevenoaks (Kent) on 8th and Alsager (Cheshire) on 13th. No matter what the conditions are, **Pallas's Warblers** *P. proregulus* now somehow seem to manage to put in their annual late autumn appearances. One arrived at Sandwich Bay on 28th, followed by another at Dungeness on 5th November. Other eastern warblers included **Arctic Warbler** *P. borealis* at Humberstone (Lincolnshire) on 10th, **Greenish Warbler** *P. trochiloides* on the Isles of Scilly on 20th, **Dusky Warbler** *P. fuscatus* at Sandwich Bay on 11th November and **Lesser Whitethroat** *Sylvia curruca* showing the characters of the Siberian race *blythi* on Holy Island on 22nd. **Richard's Pipits** *Anthus novaeseelandiae* were scarce, with nine of the 16 reported being on Fair Isle, which, like other observatories, had a lean time, but still managed **Black-throated Thrush** *Turdus ruficollis* on 17th, **Citrine Wagtail** *Motacilla citreola* on 14th, **Little Bunting** *Emberiza pusilla* on 2nd and **Rustic**

Buntings *E. rustica* on 5th and 12th. The latter species also occurred at Gibraltar Point (Lincolnshire) on 1st, the only rarity there in this period.

The Isles of Scilly, attracting over 200 birdwatchers, was comprehensively surveyed, but, apart from those species already mentioned, only three **Little Buntings**, two **Scarlet Rosefinches** *Carpodacus erythrinus* and a **Rose-coloured Starling** *Sturnus roseus* were found. The rarest passerine of the late autumn was seen by only one—lucky—observer: an **Eye-browed Thrush** *Turdus obscurus* at Lochwinnoch (Strathclyde) on 22nd; the only previous records in Britain and Ireland were three in 1964, but two were reported in Finland in spring 1978 (*Brit. Birds* 71: 585).



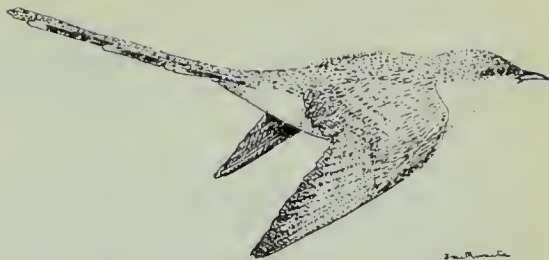
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Shrikes

Moderate numbers of **Great Grey Shrikes** *Lanius excubitor* arrived with the thrush movements in mid October, but the appearance of three **Isabelline Shrikes** *L. isabellinus*, at Winspit (Dorset) on 14th, Donna Nook (Lincolnshire) on 29th and on the Isles of Scilly, was unusual: less than ten records of this taxonomically difficult group having been accepted in the past. With settled conditions over southern Europe for most of the time, **Woodchat Shrikes** *L. senator* might have been expected, but only two were reported: at Minster (Kent) on 8th and Slapton Ley (Devon) on 4th November.

Nearctic vagrants

Following the two Red-eyed Vireos *Vireo olivaceus* already reported, there was a **Black-and-white Warbler** *Mniotilta varia*—described on its last occurrence as an 'animated humbug'—on Cape Clear Island (Cork) on 18th. Unusual arrivals on the East Coast, especially considering their past westerly occurrences, were two **Yellow-billed Cuckoos** *Coccyzus ameri-*



canus: one ringed at Spurn Point on 27th and one found freshly dead at Welton le Marsh (Lincolnshire) on 30th.

Further autumn wader records included a **Lesser Yellowlegs** *Tringa flavipes* at Ythan (Grampian) on 7th and **Buff-breasted Sandpipers** *Tryngites subruficollis* at St Just (Cornwall) on 4th November and Chew Valley Lake (Avon) on 14th. The last locality also produced two **White-rumped Sandpipers** *Calidris fuscicollis* on 27th. Patient scrutiny by several watchers of flocks of Golden Plovers *Pluvialis apricaria* was rewarded by the discovery of the elusive **Lesser Golden Plover** *P. dominica* in their midst. One was found at Stithians Reservoir (Cornwall) in late October and others on the Isles of Scilly on 20th and at Elmley (Kent) on 29th.

While mentioning waders, Palearctic species seen were **Terek Sandpiper** *Xenus cinereus* at Akeragh Lough (Co. Kerry), **Great Snipe** *Gallinago media* at Blakeney (Norfolk) on 1st and Saltfleetby (Lincolnshire) on 8th, **Sociable Plover** *Chettusia gregaria* at Arlington Reservoir (East Sussex) and **pratincoles** *Glareola* at Banks Marsh and Martin Mere (Lancashire) on 14th and 17th, the latter being identified as **Collared G. pratincola**.

Wildfowl

A lone rare goose is always considered unlikely to be wild, so the status of a **Red-breasted Goose** *Branta ruficollis* which



appeared at Covenham Reservoir (Lincolnshire) on 1st and was seen flying over Spurn Point on 2nd is uncertain, as is another (or the same) at Westbere (Kent) on 21st. An exciting find, although presenting difficulties in identification, was a claimed female **Barrow's Goldeneye** *Bucephala islandica* at Covenham Reservoir on 4th November. A **King Eider** *Somateria spectabilis* has returned to winter at Loch Ryan (Dumfries & Galloway), where it was seen on 31st; and a **Surf Scoter** *Melanitta perspicillata* was reported at Fraserburgh (Grampian) on 29th. Other Nearctic ducks were a **Blue-winged Teal** *Anas discors* at Marazion (Cornwall) on 22nd, a **Teal** *A. crecca* showing the characters of *A. c. carolinensis* on the Hayle Estuary (Cornwall) and a **Ring-necked Duck** *Aythya collaris* bedazzled, caught and ringed on Fair Isle on 9th.

Birds of prey

No invasion of **Rough-legged Buzzards** *Buteo lagopus* occurred, but four sightings were reported, from Hadley Wood (Hampshire) on 15th, two in Kent and one in north Norfolk in November. A surprising record was of an adult **Bald Eagle** *Haliaeetus leucocephalus* at Llyn Coron (Anglesey) on 17th, which if acceptable would be a splendid addition to the British and Irish list. Such a bird is unlikely to go unnoticed if it remains in the country. Records of **Goshawks** *Accipiter gentilis* away from their breeding areas are

a good sign that the population may be spreading. One was reported from Co. Cork and another from Walberswick (Suffolk) in early November. Also reported were a **Black Kite** *Milvus migrans* at Cley (Norfolk) on 15th, a **Red-footed Falcon** *Falco vespertinus* at St Margaret's Bay (Kent) on 20th and a **Lesser Kestrel** *F. naumanni* at Slapton Ley (Devon) on 29th.

Inland gulls

Once again, a **Mediterranean Gull** *Larus melanocephalus* has appeared at Epsom Common (Surrey): not, however, last winter's individual (*Brit. Birds* 71: 144, plate 49), but a first-year bird (plate 14). Perhaps the daunting task of searching through inland gull concentrations is stopping any more evidence of inland wintering being found.

The Loch Ken (Dumfries & Galloway) **Laughing Gull** *L. atricilla* (*Brit. Birds* 71: 608) also stayed long enough to be photographed (plate 15).

Latest news

There is usually relatively little of note in December, but 1978 proved an exception. The bird of the month was the first **Greater Sand Plover** *Charadrius leschenaultii* ever to be reported in Britain and Ireland: at Pagham Harbour (West Sussex) from 9th to at least 17th, by which time it had been seen by about 450 observers.



14. Left, first-winter Mediterranean Gull *Larus melanocephalus*, Surrey, October 1978 (*R. J. Chandler*)

15. Below, Laughing Gull *Larus atricilla* (probably second-winter), Dumfries & Galloway, October 1978 (*Donald A. Smith*)



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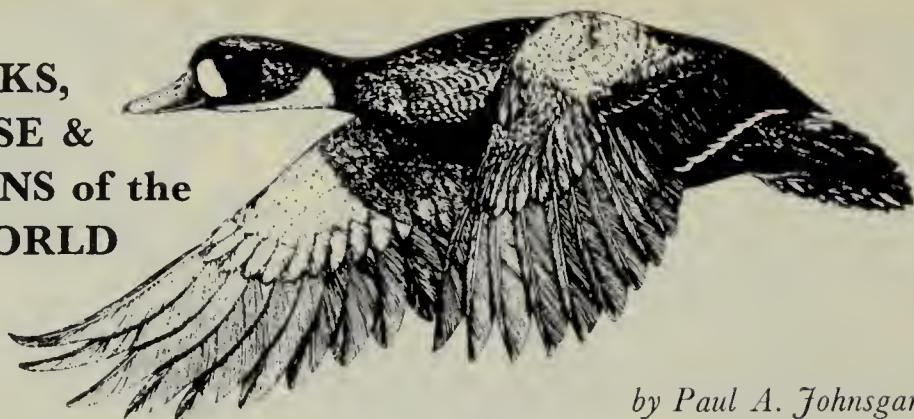
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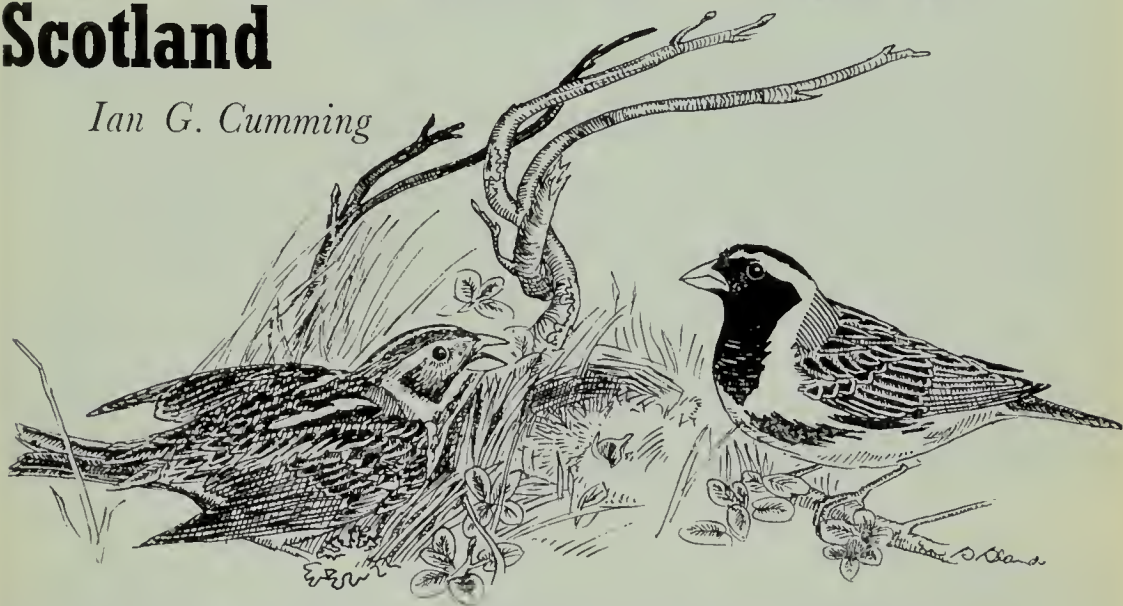
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British Birds

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Lapland Buntings breeding in Scotland

Ian G. Cumming



Another species joins the long list of Fenno-Scandian birds which have bred in and colonised northern Britain in recent years

On 19th June 1977, I took my family for a climb up a Scottish mountain to show them Ptarmigan *Lagopus mutus*. We were walking at 900 m over hummocky frost bumps with short grass and heather *Calluna* between melting snowfields when I saw a small bird on the ground 6 m ahead. It had its back to me, and its orange-chestnut nape was very striking. When I moved and got a side view, I saw that it was a male Lapland Bunting *Calcarius lapponicus* (plate 16). He was in full breeding plumage, looking very handsome, with white head markings showing up vividly against the black of the face and upper breast. The chestnut-orange nape and the yellow bill made him look even more colourful than illustrations in field guides. The bird seemed very tame and showed no inclination to fly. After watching him for some time as he hopped among the hummocks, I noticed that he was being followed by a female Lapland Bunting. She was amazingly well camouflaged, her dull plumage merging with the brown terrain (plate 17). She was drab-looking, with facial markings similar to a female Reed Bunting *Emberiza schoeniclus*, but had the distinctive chestnut nape of an adult in breeding plumage. She approached the male and crouched in a food-begging position, mouth agape and wings quivering. She solicited thus several times, but elicited no discernible response.

We were walking away when we disturbed a small bird from a clump of grass about 50 m from the courting pair. It flew around us, giving a double-note alarm call. On searching the ground, my wife found a nest



16. Male Lapland Bunting *Calcaeus lapponicus*, Scotland, June 1977 (Ian G. Cumming)



17. Male (left) and female Lapland Buntings *Calcaeus lapponicus*, Scotland, June 1977 (Ian G. Cumming)

in the side of a tussock. The nest was a neat grass bowl lined with Ptarmigan feathers. There were no eggs. The bird was a second female Lapland Bunting.

On 26th June, I returned to the mountain and found that the nest contained four dark grey, mottled eggs (plate 18). About 40 m away, I found a second Lapland Bunting nest with four eggs (plate 19). The bowl of this nest was made with heather twigs and was similarly lined with Ptarmigan feathers. Again, I saw one male and two female Laplands.

I returned to the mountain ten days later with Roy Dennis and found that both broods had hatched. Roy estimated that they were five days old. There was ample insect life at that altitude and we saw the adults carrying crane-flies (Tipulidae) to their young.

I returned finally to the site on 17th July. The weather was very bad, with thick cloud, heavy rain and visibility only about 10 m. I eventually located the nests and found them both empty. I could not find the birds in the poor conditions, but they may have been in the area.

At no time did I see more than three adult birds and I believe that the male was mated to both females. Although I did not see the young fly,

18. Nest of Lapland Bunting *Calcarius lapponicus*, made of grass and containing four eggs, Scotland, June 1977 (Ian G. Cumming)



19. Nest of Lapland Bunting *Calcarius lapponicus*, made of heather twigs and containing four eggs, Scotland, June 1977 (Ian G. Cumming)



I think it is reasonable to assume that they did. The only predators that I saw in the area were a Golden Eagle *Aquila chrysaetos* and a Peregrine *Falco peregrinus*. Large numbers of Black-headed Gulls *Larus ridibundus* had moved up the mountain after the crane-flies, and may have been a hazard to nestlings and fledglings. Other species nesting in the immediate vicinity were Dunlin *Calidris alpina* and Golden Plover *Pluvialis apricaria*.

The mountain seemed quite popular with hill-walkers, but the camouflage of the nests and of the birds was so good that I should think they were left undisturbed.

On 18th June 1978, I returned to the previous year's nest-site in the hope that the Lapland Buntings had returned, but none was to be seen; even the Dunlins and Golden Plovers were absent. There was no snow left in areas where it had been extensive in 1977. In 1978, although there had been late snowfalls, it cleared earlier than it had in 1977. I wonder if this was a factor determining the absence of birds?

Summary

In June 1977, one male and two female Lapland Buntings *Calcarius lapponicus* and two nests were found at 900 m on a Scottish mountain. On subsequent visits, the nests each contained four eggs and then four nestlings about five days old. This constitutes the first breeding records of Lapland Bunting in Britain and Ireland, but follows the trend for colonisation of northern Britain by Fenno-Scandian species.

Ian G. Cumming, 11 Canongate, St Andrews, Fife

Background to the Scottish breeding of Lapland Buntings

The Lapland Bunting has a circumpolar Holarctic distribution in the tundra and boreal climatic zones (Voous 1960; fig. 1). Relatively small numbers occur on passage (mostly autumn) and overwinter in western Europe, with occasional larger influxes, such as that in autumn 1953 (*Brit. Birds* 47: 95, 225-226, 421) which was thought to have originated from Greenland. Larger than usual numbers were reported in the Netherlands and in Britain in autumn and winter 1977/78 (*Brit. Birds* 71: 51, 93, 194, 257), but no recent increase in breeding numbers or range expansion has been reported in 'European news'. The first hint of the possibility of breeding in Britain came in 1974, when a male in breeding plumage was seen in possible breeding habitat in Caithness, Highland, on 30th June (*Brit. Birds* 71: 29). Then came the events described above and, subsequently, other instances of summering and breeding, which will be noted in forthcoming reports on 'Rare breeding birds in the United Kingdom'. The Lapland Bunting has now been added to Schedule 1 of the Protection of Birds Act 1967 (see *Brit. Birds* 72: 48), so has the added protection of special penalties.

The breeding of the Lapland Bunting in Scotland was not entirely unexpected, since, presumably in response to climatic factors, it is only the most recent of a long list of northern species which have colonised Scotland in recent decades. A few pairs of Goldeneyes *Bucephala clangula* have nested annually since 1970. It is perhaps not fair to include the Osprey *Pandion haliaetus*, for the well-known breeding since 1954 or 1955 is recolonisation, following extermination by man in the late 19th and early 20th centuries, and not colonisation. Pairs of Sanderlings *Calidris alba* have twice been seen on Scottish mountains in recent years (1973 and 1974), but there has been no proof of breeding. Temminck's Stints *C. temminckii*, however, have nested in several years since 1969, compared with only four previous attempts (in 1934-56). Wood Sandpipers *Tringa glareola* started to colonise Scotland even earlier, with some discovered in most years since 1959, and a peak of five to eight pairs in 1972. Proof of breeding by Turnstones *Arenaria interpres* remains as elusive as ever, but suspicious summer sightings seem to be increasing in frequency, although, on the debit side, numbers of Red-necked Phalaropes *Phalaropus lobatus*



Fig. 1. Breeding distribution of Lapland Bunting *Calcarius lapponicus* (after Voous 1960)

are decreasing. Single Long-tailed Skuas *Stercorarius longicaudus* have appeared in colonies of Arctic Skuas *S. parasiticus*, but no pair has yet been reported. An adult Glaucous Gull *L. hyperboreus* paired to a Herring Gull *L. argentatus* has reared hybrid young at a Shetland site since 1975. The saga of the Fetlar, Shetland, Snowy Owls *Nyctea scandiaca* is well known: a pair bred each year during 1967-75, but only females remain there now. Wrynecks *Jynx torquilla* have started to colonise Scotland, with pairs in many but not all years since 1965: this, coinciding with a withdrawal from southern England and adjacent parts of the Continent, strongly points to a Scandinavian origin.

Passerine colonists have been fewer, but, after acting suspiciously in 1972, 1973 and 1976, breeding of Shore Larks *Eremophila alpestris* was proved in 1977. Bluethroats *Luscinia svecica* have not been rediscovered since the first, abortive 1968 breeding attempt. In contrast, Fieldfares

20. Male Lapland Bunting *Calcarius lapponicus* at nest with four young, Finland, July 1976
(K. J. Carlson)





21. Male Lapland Bunting *Calcarius lapponicus* at nest, Finland, July 1970 (J. B. & S. Bottomley)

22. Female Lapland Bunting *Calcarius lapponicus* at nest with young, Finland, July 1970 (J. B. & S. Bottomley)



Turdus pilaris have been regular ever since the first pair was found in Orkney in 1967. Colonisation by Redwings *T. iliacus* started earlier, with a few pairs in the late 1950s, and as many as 300 pairs were estimated in 1972 (when 42 sites were found and 12 pairs proved breeding), but seem now to have declined. The position of Red-backed Shrike *Lanius collurio* resembles Wryneck: declining in and withdrawing from southern England, but one pair summering in Scotland in 1970 and breeding proved there in 1977, presumably derived from the Scandinavian population (increasing numbers are now breeding in southwest Norway). Thrush Nightingale *Luscinia luscinia* and Scarlet Rosefinch *Carpodacus erythrurus*, both increasingly reported as vagrants to Britain and Ireland and both increasing as breeding birds in Norway, may perhaps be among the next Scandinavian species to colonise Scotland. (Sources listed in 'References'.) JTRS

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Honey Buzzard at wasps' nest

F. K. Cobb

Excavation of a wasps' nest involves various problems, even for a Honey Buzzard



A Honey Buzzard *Pernis apivorus* was watched at a nest of a social wasp *Vespa* at Holkham, Norfolk, from 11th to 16th October 1976. As there appears to be only one account of feeding behaviour in the British

literature (Trap-Lind 1962), and this relates to Denmark, some notes on the Norfolk occurrence may be of interest.

The buzzard was first seen at the wasps' nest at 15.45 GMT on 11th and, as there was no visible sign of previous digging, it seemed likely that it had discovered the nest only that afternoon. Observations were made at a range of about 20 m. From 16.50 to 18.00, the bird dug steadily at the entrance hole, but for perhaps half the time it seemed to be having considerable difficulty in getting through the top-soil. Several times it moved a little to one side, and attempted to dig directly down; since the nest was in a bank, this could well have brought it directly on to the comb. It never persisted, however, quickly returning to dig at the wasps' hole.

When the nest was examined later, it could be seen that the difficulty had probably been caused by a dense mass of grass roots. As wasps' nests may be among the roots of trees, it might sometimes be impossible for the hawk to dig out the insects' own tunnel; the attempts of this bird to try a fresh line may therefore indicate the ability to deal with a difficult nest by varying the approach.

Once past the obstruction, the bird concentrated on the entrance hole, and sand could be seen squirting back from under its tail as it dug its way in. The whole time, it was being attacked by large numbers of wasps. How much these attacks bothered the bird it is impossible to say, but it appeared to be very much discomforted by them. Constantly shrugging its body, shaking its feathers and making frequent rapid pecks at breast and back, it resembled a domestic chicken suffering from a particularly heavy infestation of feather-lice. Finally, after an even stronger flurry of pecking and shrugging, suggesting the heaviest attack from the wasps yet, it flew up into a small birch *Betula* within sight of the nest. No further digging took place that night, and no comb had yet been reached.

On the next day (12th), the bird did not appear at the nest until 08.50 hours. It was watched for about three hours, but did little or no digging, although it spent almost the whole time on the ground close to the nest. On several occasions, it moved to the nest entrance, but immediately became smothered in wasps and retreated by flying to various places some 20 m away from the nest, where it spent its time extensively preening.

During the afternoon, the pace of the digging was stepped up, and comb was soon being extracted. The hole was by now much widened and deepened, so that at times only the bird's back could be seen. But it still spent much time standing only half into the hole, at the side, or even a metre or so away from it, smothered in wasps, which it busily removed, and repeatedly preening.

After preening, it would stand quite inactive for several minutes, then walk in purposeful manner to the hole and resume digging. On at least three occasions, as it got down into the hole, it seemed to encounter particularly heavy attacks from the wasps, making it take several hasty steps backwards out of the hole again, looking rather comical.

Each time that this hasty withdrawal took place, the buzzard could be seen shaking its head quite violently from side to side, then making rapid pecks at its breast. On one or two such occasions, it jumped perhaps a

metre from the ground, partly opening its wings, and gave a distinct impression of having been stung.

On the following day (13th), the pattern of events was much the same. The Honey Buzzard spent most of the morning around the wasps' nest, usually perched low in trees within sight of the nest (occasionally on the ground near the nest), but it did no digging or feeding. During the afternoon it fed strongly.

On the morning of 14th there was heavy and continuous rain. For the first time, the bird was not seen near the nest, but was discovered about 2 km away, in the woods.

Unfortunately, I was unable to visit the nest on 15th, but other observers told me that the bird was still there and feeding in the afternoon.

On 16th, feeding did take place during the morning, but at about 13.00 hours the bird flew away towards the south across open fields, and was not seen again. At this time, wasps were still going in and out of the nest in a steady stream, as indeed they were five days after the bird had gone. But, without protective clothing, it was not possible to examine the nest closely enough to see whether any comb was left intact. Perhaps the bird had ingested sufficient food for its journey, or it had cleaned out the nest so far as its food was concerned, but the continued presence of large numbers of wasps may indicate that the nest had not been totally destroyed even after six days of predation.

Most if not all of the many observers who watched this bird were astonished by its tameness. Two examples may serve to illustrate this.

When the bird was first discovered, a falconer, with falcon on wrist, had just appeared out of a small clump of pines *Pinus* some hundred metres or so ahead of us. As soon as we reached this small wood, the Honey Buzzard appeared, and flew to within perhaps 20 m of us. For several minutes, it flew around us, alternately perching on low branches of the pines, to regard us from close range. It seemed absurd to associate this species with a falconer, but, at the same time, it was difficult to envisage other than a tame bird behaving like this. It was not until it dropped to the ground, momentarily out of sight, and arose again almost immediately to perch on a low bough, surrounded by a cloud of angry wasps, that we realised what was happening.

The wasps' nest was 12 m from the edge of a track, and quite visible to the many pedestrians, especially dog-exercisers, who used it. At first, when anyone passed close to it along the track, the bird would fly low into the shelter of the trees, to return immediately when the disturbance had passed.

By the afternoon of the second day, however, if it was digging or standing at the nest, it no longer bothered to fly away, leaving only if disturbed by someone between the nest and the track. It was, however, so still and unobtrusive that, so far as could be seen, no passer-by was even aware of its existence.

Discussion

The lores and forehead of the Honey Buzzard are covered with small scale-like feathers, apparently thought to be a protection against stings.

Most accounts seem to imply that the rest of the body is not vulnerable. No doubt the face would be subject to the heaviest onslaught from wasps, but in this instance it was certainly not the only area under attack: at almost any time, numbers of wasps were crawling about on the Honey Buzzard's back, wings and breast. It was not possible to see whether any were getting under the feathers and on to the skin, but, from the extremely frequent and very extensive preening, this did seem possible. Several times, when preening away from the nest, close observation showed that not only were the contour feathers carefully dealt with, but much attention was given to the body or down feathers underneath; and, on three occasions, the bird was seen to swallow something, possibly wasps which had penetrated well under the feathers.

Mention has already been made that, at times, the bird appeared to have been driven back by the wasps, and might even have been stung. Fry (1969), after conducting experiments with bee-eaters (*Meropidae*), concluded that they appeared to have partial immunity to venom. Birkhead (1974) could find no record of examination of mouth or alimentary canal of the Honey Buzzard to decide whether they showed any adaptations, but thought it likely that the species had some immunity.

Shrikes *Lanius* and bee-eaters regularly feed on wasps, but have specialised behaviour enabling them to remove the stings, and, in any case, take only isolated individuals. The Honey Buzzard is probably the only European species which suffers massive onslaughts of wasps in a normal day's feeding, and it would be surprising if it had not developed some considerable immunity. Perhaps, however, this immunity is not total. Trap-Lind (1962) stated that the wasps, swarming in numbers around his bird, did it no harm, but just annoyed it, and that it killed many by decapitating them. Would the bird have bothered with them, however, unless they were capable of doing it some harm?

The Norfolk Honey Buzzard appeared to have no interest in the adult wasps as food. This was perhaps confirmed when the vicinity of the nest was examined afterwards: it was littered with comb, crushed into very small pieces, apart from a few relatively large triangular pieces with intact cells, some of which contained young, perfectly formed wasps, apparently ready to emerge, which, seemingly, the bird had discarded.

Doubts have been expressed as to whether adult wasps are eaten. Trap-Lind (1962) described them as being killed, but not eaten. Blanc (1957) recorded a Honey Buzzard arriving at its nest with a large wasps' nest in its talons: a number of wasps, transported with the comb, whirled around it, but were skilfully caught in the beak and fell dead to the foot of the nesting tree. Thiollay (1967) listed 149 nests of Hymenoptera consumed, chiefly of wasps *Vespula*, but also some of bumble bees *Bombus*. He stated that honey, wax, eggs, pupae and imagos are eaten, but unfortunately gave no indication of the quantity of imagos consumed. Castroviejo & Fernandez (1968) listed the stomach contents of four adults as: (1) 50 caterpillars of the large Noctuid moth *Catocala nymphanae*; (2) the remains of at least 30 adult wasps; (3) 50 pupae of the German wasp *V. germanica*; and (4) two thoraxes of wasps, and four of paper-wasps

Polistes. At one nest that they were studying, almost all the food brought was honey-comb of wasps, and no adults. Hagen & Bakke (1958) found adult wasps in 11 out of 13 crop and gizzard analyses. Harrison (1931) found that a stomach in autumn contained comb, larvae, and immature workers of the common wasp *V. vulgaris*.

Thus, from the rather limited literature on the subject, it seems certain that adult wasps are eaten at times, but rarely in any quantity. It is difficult to envisage Honey Buzzards taking adult wasps on any scale in the manner of a bee-eater, so a quantity would be eaten only at a wasps' nest. There, it might be expected that the grubs, apparently the favourite—and certainly the richest—food, would be preferred.

The timing of the bird's feeding, as distinct from the initial period of digging, may have some significance: with the exception of the last day, it fed only during the afternoon. Possibly the maximum number of wasps were away from the nest then? And the only time that the bird was found at any distance from the nest was during a period of heavy and continuous rain, when most of the wasps may have been confined to the nest.

Van der Geest (1961) observed that during rain the Honey Buzzards' diet contained relatively more birds and amphibia, and they came back to the wasps' nests only when it stopped raining and the adult wasps were flying again. This tends to confirm the visual impression of the Norfolk bird's considerable discomfort when the wasps were attacking it in strength, and raises the intriguing question: do the wasps ever win these battles? It seems unlikely, if this example was typical, for, although the bird was apparently driven back several times, there was yet an appearance of remorseless inevitability in the way it resumed after each lengthy spell of preening.

The renowned secrecy and elusiveness of the Honey Buzzard was well illustrated by the behaviour of this bird. Never out of sight of the wasps' nest, except on the one wet day, it stood on the ground, or perched low in nearby trees for long periods, giving an impression of great sluggishness.

Since it was out of the breeding season, and in a protected area, no attempt was made to keep this Honey Buzzard's presence secret. Large numbers of birdwatchers lined the bushes alongside the track for most of the week, and, with very few exceptions, all were discreet and no harm came to the bird, despite its tameness and consequent vulnerability.

Acknowledgements

I am most grateful to P. J. Olney for his comments and suggestions; and to my wife and Miss A. J. Towns who discovered the bird with me.

Summary

The excavation of a nest of a social wasp *Vespula* by a Honey Buzzard *Pernis apivorus* at Holkham, Norfolk, during 11th to 16th October 1976 is described and discussed.

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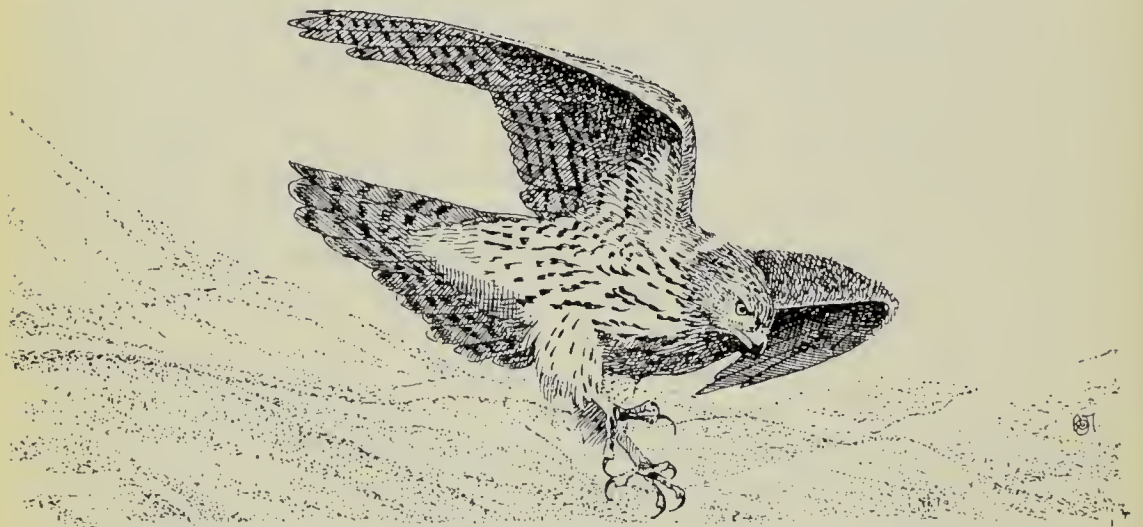
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Winter predation by Goshawks in lowland Britain

R. E. Kenward



The Goshawk is recolonising Britain. What will be its diet, and its effect on an economically important prey, the Woodpigeon?

Now becoming re-established as a breeding species in Britain (Sharrock 1976), the Goshawk *Accipiter gentilis* is likely to increase the predation on a number of medium-sized birds and mammals. One interesting aspect of this is its possible effect on the Woodpigeon *Columba palumbus*, a species which can cause crop damage and is sometimes an important food for Goshawks. In the breeding season, for instance, Woodpigeons can account for as much as 41%, or less than 10%, of prey brought to Goshawk nests in central Europe (Tinbergen 1936, Uttendörfer 1952).

Goshawk diet outside the breeding season has been studied by searching for prey remains (Brüll 1964, Thiollay 1967). In a Dutch study area one winter, 72% appeared to be Woodpigeons (Opdam 1975); but this

technique probably overestimates the proportion of pale-coloured prey (e.g. pigeons) because their remains are particularly eye-catching. Bias also occurs in other winter diet analysis techniques (Errington 1932). Pellet analysis tends to overestimate the proportion of large prey, which are represented in more than one pellet if a carcass is used for several meals; and to bias against the recording of small prey whose bones are completely digested, unless correction factors can be applied (Dare 1961). Gut-content analyses can be biased by variation in prey digestibility and by samples originating mainly from poultry farms and game-rearing areas. Brown (1975) has suggested that the value of a diet analysis depends on the number of prey items recorded, but a small quantity of unbiased data may be more useful in a predation study than any amount of biased material.

This paper presents data obtained by following radio-tagged Goshawks to obtain accurate records of their diet, their rate of predation on Wood-pigeons, and their ability to survive in an area of lowland Britain.

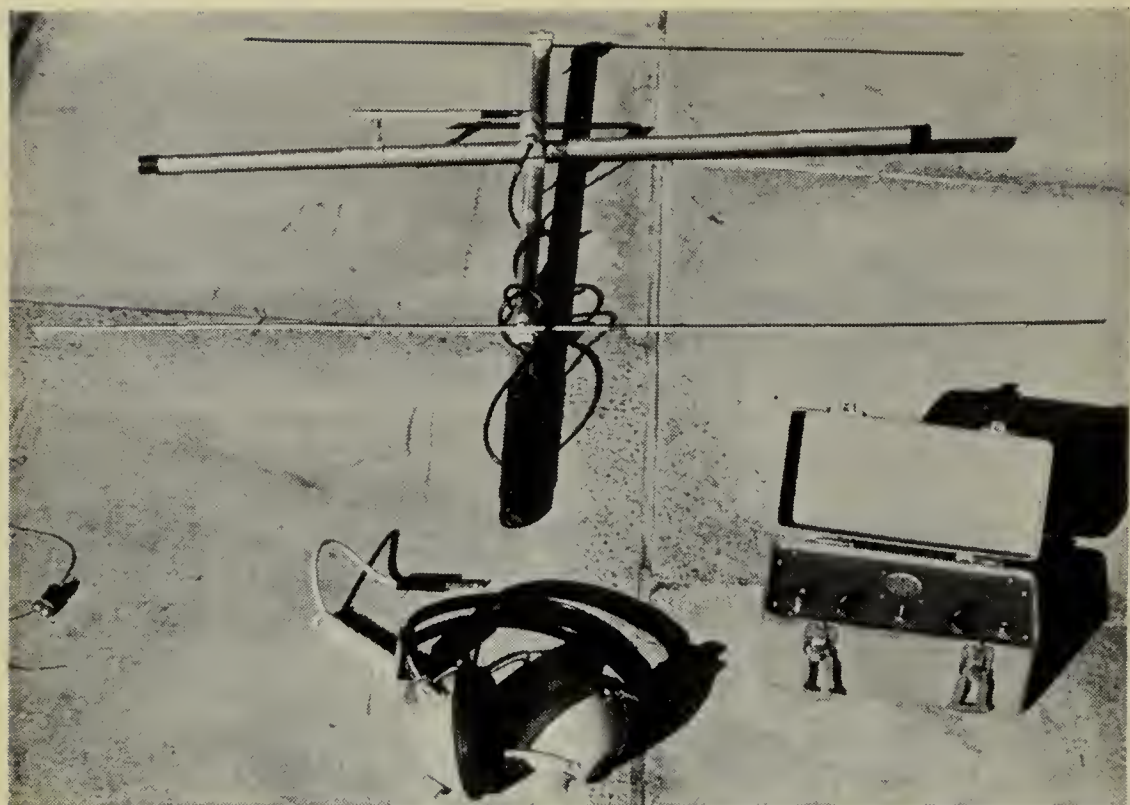
The study was conducted in an area of rolling farmland (primarily arable, but with some pasture) between 80 m and 250 m above sea level, near the town of Chipping Norton, Oxfordshire. Woodland, which is scattered and mainly deciduous, accounts for about 8% of the land use; streams occur in the valleys, with the occasional small pond; and there are larger artificial lakes of up to 1.5 ha in private parks.

The avifauna is typical of central English lowland farmland (see Williamson 1967). The most abundant larger (200–1,000 g) wintering species are Woodpigeons, Rooks *Corvus frugilegus*, Jackdaws *C. monedula*, Lapwings *Vanellus vanellus*, Common *Larus canus* and Black-headed Gulls *L. ridibundus*, and Grey *Perdix perdix* and Red-legged Partridges *Alectoris rufa*. In parts of the area, Pheasants *Phasianus colchicus* are reared and are locally abundant; and Moorhens *Gallinula chloropus* are common along the waterways. The predominant mammal weighing more than 200 g is the rabbit *Oryctolagus cuniculus*, which is moderately abundant locally but still suffers from outbreaks of myxomatosis.

Individual hawks and radio-telemetry

With no wild Goshawk population in Oxfordshire, it was necessary to study released birds. Since the past history of a hawk might influence its hunting, four birds with different backgrounds were used. Falconry terminology denotes each one's origin concisely. The 'eyass' (= obtained from the nest) was brought from Finland, trained, and flown at quarry using falconry techniques (see Woodford 1960). The other three had all been trapped after learning to hunt for themselves. One of two 'passagers' (= obtained as first-winter birds) came from the German Federal Republic and the other from Finland, while a three- to four-year-old 'haggard' (= obtained as an adult) was also Finnish. These last three had received some handling and had become fairly tame, but had not been trained. All four were males.

The German passager was released at dawn on five days in January 1974, and was recovered to the fist from a kill, or to the lure, on four of



23. Radio-telemetry equipment used for tracking Goshawks *Accipiter gentilis*. Clockwise from right: receiver, earphones, transmitter and receiving antenna (Edward Grey Institute)

them; on the fifth, he was lost. The Finnish haggard was similarly released on four days between late September and early November 1974; after release on a fifth, he remained free for 11 days. Between early December 1974 and mid March 1975, the Finnish passer and the Finnish eyass were each released on two occasions and left free for totals of 37 and 32 days respectively.

Each hawk was equipped with a 173-MHz transmitter, weighing between 7 g and 15 g, attached proximally to the upper surface of a central rectrice using thread and epoxy-resin adhesive. The quarter-wave antenna was bound for about three-quarters of its length to the feather shaft, and was therefore unlikely to be damaged by preening or to tangle in vegetation. (Keeping the antenna straight and off the ground enhances signal transmission.) This form of transmitter attachment appears not to interfere with a hawk's prey-capture, nutritional condition, or tendency to leave an area (Kenward 1978a). The portable receiver was operated with a three-element unidirectional hand-held Yagi antenna (plate 23). This equipment gave a range of several kilometres when a hawk was perched in a tree, but occasionally as little as 500 m when one was on the ground in thick cover.

Results and discussion

Diet

Radio-telemetry was used to complement vision in locating and following the hawks without getting close enough to disturb them or their prey. The lack of leaves in the deciduous woodland assisted observation. The Goshawks usually hunted from inconspicuous perches in trees; they

changed position by flying an average of 100 m in woodland, or 200 m in open country, most frequently at intervals of two to six minutes. Prey-capture was rarely seen; it was usually detected when the radio signal indicated that a hawk had ceased hunting flights, was on the ground and, on some occasions, was making rhythmic feeding movements (see Kenward 1976 for details).

Feeding hawks were approached to identify their prey. Those remaining free had their pigeon kills removed for analysis and replaced by similar food. The eyass stayed tame enough to be coaxed from his prey to the substitute food, but the other hawks became shy of human beings within two days of release and had to be frightened away. If they left their kill, they returned within an hour, unless they had already had a substantial meal. Kills they flew off with could be identified from the pluckings. Prey the size of a thrush *Turdus*, weasel *Mustela nivalis* or larger took from 15 minutes to several hours to consume, but smaller prey may sometimes have been eaten so rapidly that it was not recorded. Nevertheless, close observation of the eyass, which did not differ from the other hawks in his hunting although he was more approachable, suggested that small mammals and small passerines were captured too infrequently to provide more than a tiny proportion of the winter diet.

The prey captured by the four Goshawks between October and March is shown in fig. 1. Individuals did not differ significantly in the proportion of their diet which was Woodpigeons, an average of 40%; nor did this proportion differ significantly during the three two-month periods

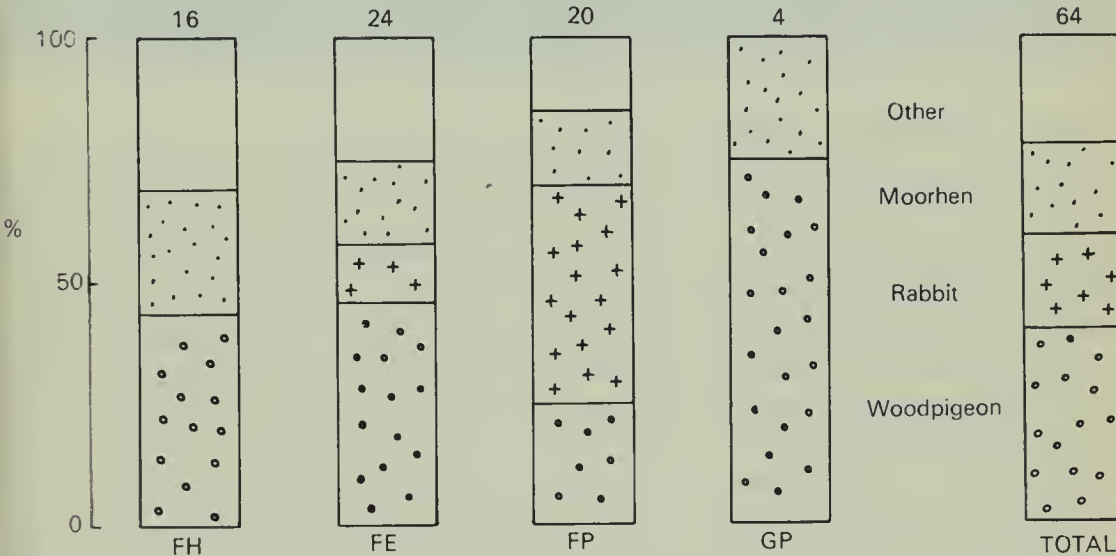


Fig. 1. Prey captured by four Goshawks *Accipiter gentilis* released in Oxfordshire during winter. Numbers above columns show total prey items. Hawks are denoted by letters below the columns: FH had been trapped in Finland as adult; FE had been obtained from nest in Finland; FP and GP had been trapped in their first winters in Finland and Germany respectively. Other prey included: 3 Pheasants *Phasianus colchicus*, 2 large crows *Corvus*, 1 Stock Dove *Columba oenas*, 1 Kestrel *Falco tinnunculus*, 1 Blackbird *Turdus merula*, 1 leveret *Lepus capensis*, 1 common rat *Rattus norvegicus*, 2 weasels *Mustela nivalis*, 1 field vole *Microtus agrestis* and one unidentified small mammal



24. Captive adult male Goshawk *Accipiter gentilis*. Clwyd, October 1971 (Dennis Green)

October-November 1974, December-January 1974/75, and February-March 1975. Moorhens and rabbits (both 19%) were the next most frequent food items: all four hawks captured at least one Moorhen, but neither the haggard nor the German passerger killed a rabbit. Since the haggard subsequently refused to pursue rabbits when flown in falconry, his failure to kill them when released in Oxfordshire probably indicated a tendency to avoid this relatively large prey, which is not found in Finland and is difficult for a male Goshawk to subdue unless he has learned to grasp it about the head.

Male Goshawks tend to capture less heavy prey than females (Höglund 1964, Storer 1966). Opdam (1975) believed that they brought fewer Woodpigeons to the nest area than did females, but the present data do not indicate that males have difficulty catching pigeons. Perhaps they avoid catching heavy prey in the breeding season or pass it to females (which can carry it more easily) at a distance from the nest. Female Goshawks might have caught brown hares *Lepus capensis*, rabbits and Pheasants more easily than did the released males, but would probably not have found Woodpigeons and Moorhens (which together formed 59% of the prey) either more or less difficult to obtain.

In winter, Goshawks occupy overlapping ranges rather than discrete territories (Kenward 1977 & unpublished). Those sharing hunting areas might have less access to the most vulnerable prey, and find quarry more sensitive to their presence, than the single released hawks. It seems likely, however, that, in lowland Britain, Woodpigeons, Moorhens, rabbits and possibly hares will be the staple food of Goshawks, unless there are marked changes in the availability of these and other prey. The three Finnish hawks gained weight in each of the five periods of continuous release. All, including the one taken as a fledgling and trained as for falconry, were able to obtain adequate food in Oxfordshire.

Frequency of kills

Following single radio-tagged hawks provides an unbiased record of their predation on all but the smallest prey; the rate of capture may, therefore, be measured more accurately than by combining analyses of stomach contents, pellets or prey remains with estimates of food value and food requirements (e.g. Craighead & Craighead 1956). Following single hawks is time-consuming, but, if determining the rate of predation on a few large prey is more important than recording all kills, then the time per recovered prey item can be reduced by monitoring several birds at once (e.g. Kenward 1977).

During the five periods of continuous release, prey-capture was monitored on 60 days and occurred on 42 (70%) of them. Two kills were made in one day by the eyass, which captured a rabbit within an hour of eating a field vole *Microtus agrestis*. On average, however, the Goshawks killed about twice in every three days (table 1).

Table 1. Interval between kills made by three Goshawks *Accipiter gentilis* released in Oxfordshire between October 1974 and March 1975

	Same day	1 day	2 days	3 days	TOTAL
Number of kills	1	28	10	4	43

Effect of Goshawks on Woodpigeons

Although a predator may reduce the numbers of a prey species by disruption of feeding (Murie 1944), as well as by killing, disturbance by Goshawks is unlikely to affect pigeon numbers. Pigeons were not usually scared away from feeding sites for long by Goshawk attacks, and they often resettled in the same place immediately after being flushed by a hawk (Kenward 1978b). Pigeons scared from their food return sooner the greater their food deficit; and, even at pastures where in midwinter they spend 95% of the day feeding (Murton *et al.* 1963), they are unlikely to be disturbed by Goshawks frequently enough to reduce their food intake (Kenward 1976).

The effect of Goshawk predation on pigeon numbers may be estimated from the number of pigeons captured per hawk-day, the hawk density, and the pigeon density. Any selection for poor quality food must be taken into account, because a predator catching prey which is doomed for other reasons has no effect on its population (Jenkins *et al.* 1964).

Table 2. Nesting densities of Goshawks *Accipiter gentilis* in central Europe

Location	Number of pairs	Area per pair (ha)	Source
North Germany	12-13	1,000	Bednarek 1975
North Germany	20	1,250	Bednarek 1975
North Germany	13	3,800	Bednarek 1975
North Germany	5	5,000	Bednarek 1975
Central Germany	8-12	2,000-3,300	Kramer 1955
Northeast France	8	1,850	Thiollay 1967
West Netherlands	2	1,900	Tinbergen 1946
West Netherlands	8-9	2,300-2,600	Tinbergen 1946
West Netherlands	14	3,200	van Beusekom 1972

Assuming that female Goshawks' rate of predation on Woodpigeons would not differ very greatly from that of males, and that the rate in a normal population would be similar to that of the single released hawks, each would capture 0.27 pigeons per day (40% of the diet at 0.67 kills per day).

Table 2 shows central European Goshawk nesting density in populations little influenced by biocide contamination. The highest density (one pair per 1,000 ha) was found in fertile areas with only 12-15% well-fragmented mixed woodland, where the species frequently nested in conifer stands as small as 20 m × 50 m (Bednarek 1975). Since these Goshawks normally produce 1.6 to 2.8 young per pair per annum (Wendland 1953, Kramer 1967), their food consumption in an area with one breeding pair should approximate to that of three or four hawks throughout the year. Although the post-breeding density (two adults and about two juveniles) will have fallen by spring, more than enough food for four hawks will be eaten while young are growing.

Studies in eastern England showed that the Woodpigeon population increases by about 2.4 times during breeding (Murton 1965). Most mortality occurs between then and February, when the density is determined by food resources. In spring and summer, the population is not limited by food; little further mortality occurs between February and the start of the peak breeding period, in July (Murton *et al.* 1964, 1966). Murton (1965) pointed out that predation (shooting) between breeding and midwinter would have to remove more than the post-reproductive population surplus to reduce the February density, but that any later predation would reduce the breeding density.

Using a bodyweight/survival relationship derived by Dr R. K. Murton and R. M. Sibly, it can be shown that Woodpigeons captured by those hawks released in the 1974/75 winter were 72% as likely to survive one month as shot pigeons. Thus, 28% of the predation would compensate mortality associated with poor pigeon condition. The bodyweight/survival relationship was based on Cambridgeshire pigeons subject to limited food resources; Oxfordshire pigeons, however, were in unusually good condition in the 1974/75 winter because, owing to a wet harvest and autumn, much shed grain remained on unploughed stubbles (Kenward 1976). With fewer pigeons likely to starve, mortality associated with prey condition might compensate that caused by predation by less than 28%.

The percentage reduction in the July Woodpigeon density, caused by Goshawks at different densities, can be estimated assuming both 28% compensation of predation mortality by selection effects and no compensation (table 3). Pigeon densities are one-quarter of those observed by Murton *et al.* (1964), because of recent agricultural changes (Murton 1974). The population surplus between July and February is the difference between a 2.4-fold increase in the July population and that supported by the midwinter food supply in the absence of predation (432 per 1,000 ha). The proportion of the surplus which would be taken by Goshawks, if the predation rate continued at 0.27 pigeons per hawk-day, indicates how much the rate could increase before hawks would take more than the surplus and therefore reduce the midwinter population. This is the time when damage to winter brassicas may occur; peas and seedlings are damaged in the summer.

Table 3. Estimated effect of Goshawks *Accipiter gentilis* on Woodpigeons *Columba palumbus* in lowland Britain

Goshawk density (per 1,000 ha)	% REDUCTION IN JULY PIGEON POPULATION IF PREDATION MORTALITY IS		% of July-February pigeon population surplus which then suffers predation
	Compensatory	Non-compensatory	
1	7		12
1		9	13
2	14		28
2		18	32
3	21		51
3		27	64
4	28		87
4		37	100*

*plus 12% reduction in February population

With a Goshawk density of four per 1,000 ha, the pigeon breeding population could be reduced by 28-37%, and remain below environment holding capacity throughout the year. The Goshawk density would, however, probably be no more than two per 1,000 ha, producing at most a reduction in the pigeon breeding population of about 20%; it would not reduce the midwinter population, even with a threefold increase in the predation rate between July and February. The rate of predation might certainly be higher in autumn and winter, when at first newly-fledged and, later, starving pigeons are available, than when they are in better condition in spring and early summer (the proportion of Woodpigeons in the diet of German Goshawks is highest in the autumn: Murton 1971).

These simple calculations ignore the possibility that Woodpigeons, which hatch more young per breeding attempt at low densities (Murton & Isaacson 1964), would compensate for the reduction in their breeding population, or that reducing the autumn population would decrease mid-winter food depletion and allow more to survive to the spring.



25. Adult Goshawk *Accipiter gentilis*, Sweden, November 1976 (Bengt Lundberg/N Sweden)

Artificially reducing young-production of Great Tits *Parus major* increases the population's survival to the next breeding season (Kluyver 1970). Such effects would diminish the impact of predation on the pigeon population. While the return of the Goshawk may be welcomed on aesthetic grounds, it is unlikely to produce a marked reduction in crop damage by Woodpigeons.

Acknowledgements

I thank the many Oxfordshire farmers and landowners who allowed me to track Goshawks across their property. Hawks were obtained with help from Dr U. Beyerbach, K. Huhtala, Dr S. Sulkava, and the British Falconers' Club; they were recovered after release thanks to J. E. Cooper, G. N. Gripper, G. Hovell and J. Wiggins. I am grateful to M. Dolan, Dr T. C. Dunstan, M. Fuller, Miss C. Hunt, Dr H. Kruuk, K. T. Marsland and the late Dr R. K. Murton for advice and technical assistance; and to Dr N. B. Davies, Dr I. Newton and Dr C. M. Perrins for comments on the written material. The work was financed by the Agricultural Research Council.

Summary

Four radio-tagged Goshawks *Accipiter gentilis* were released for a total of 89 days in Oxfordshire to study their predation and survival in winter. Three, including one taken from the nest and trained as for falconry, were released for five periods of 11-21 days and gained weight in each. Woodpigeons *Columba palumbus* formed 40% of the diet; rabbits *Oryctolagus cuniculus* and Moorhens *Gallinula chloropus* made up another 38%. Estimating the effect of various Goshawk densities on the Woodpigeon population in Britain, it is concluded that any reduction of pigeon crop damage as a result of predation by Goshawks is likely to be slight.

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Mystery photographs

26 The rounded head, large staring eye, cocked tail and stance of the passerine in plate 9 (shown reduced here) instantly suggest a flycatcher (Muscicapidae). This individual lacks the streaked breast and forehead of a Spotted Flycatcher *Muscicapa striata* and the white markings in the wing



27. Mystery photograph 27. What is this species? Answer next month

of a Pied *Ficedula hypoleuca* or a Collared Flycatcher *F. albicollis*. The distinct white orbital ring might suggest Brown Flycatcher *M. latirostris*, which, although not yet on the British and Irish list, has several times been suspected, and has occurred in Europe, but the striking white undertail-coverts and the white flashes at the sides of the basal half of the tail rule that species out and indicate Red-breasted Flycatcher *F. parva*. The photograph, of an adult male, was taken by Ilse Makatsch in Czechoslovakia in June 1964. It shows well the characteristic jizz of this delightful species, with its habitually cocked tail. Most records in Britain and Ireland occur in autumn, when the majority are first-winter individuals (told by the line of buff tips to the greater coverts). The distinctive calls are often the first clue that a Red-breasted Flycatcher is lurking in the leafy shade of a group of bushes: a sharp 'chit' or a short, dry, churring 'trrr'.

There are many other flycatchers of the same genus in central and eastern Asia, most of them being resident or only altitudinal migrants, but care should be taken to check that none of the species that are sometimes imported as cage-birds is involved: the Orange-gorgeted Flycatcher *F. strophciata*, for instance, has twice occurred on Lundy, Devon, but in all plumages has very obvious pale pink legs and feet. NICK DYMOND

Obituary

Jeffery Graham Harrison, OBE, MB, BChir (1922-1978)

Jeffery Harrison's sudden and untimely death on 1st September 1978 came as a thunderbolt particularly to his friends, and to anybody who had come into contact with him—largely because of the tremendously evident vitality of the man. So great was his involvement in so many fields that in no way can words alone fill the gap he leaves: most of us met him in only one facet of his daily lives—lives in the plural, because it always seemed to me (enviously) that in each 24 hours he managed to cram at least three normal days!

British Birds readers will remember Jeffery Harrison as wildfowler-naturalist, duck and wader expert, lecturer and writer, blending science and commonsense in a quickfire but easily understood style. His recent book *The Thames Transformed* (1976, written with Peter Grant), illustrated by his wife Pamela's photographs, is an excellent example of his untiring zeal in researching around the main theme, and of his ability to tell a fascinating story forcibly and well. Not so many will know of him as a skilful surgeon and family doctor, a GP in the old-fashioned sense, with a wide following in and around Sevenoaks ever seeking his friendly advice and counsel, and not just on medical matters. In the background, too, he



26. Dr Jeffery Harrison (1922-1978) with his wife Dr Pamela Harrison (*Guy Harrison*)

was a businessman, involved in the family shipping interests. In everything he did, never was there a rest between enterprises.

Jeff was the essential link between wildfowling and conservation; and here we may miss him most severely, as none could try to equal him in both fields. He had a vast store of knowledge of duck and wader numbers, migrations and distributions, and travelled the world with his photographer-wife Pamela in pursuit of his interests. The result was not just an enrichment of his personal knowledge, because the two of them, in enormously popular lectures, shared their enjoyment and interest with thousands of listeners.

The Harrisons are a close-knit family—and the Harrison Trust will serve as a memorial to Jeff as it does to his father, Dr James Harrison. Dr James was involved in the early parry and riposte of the 'Hastings Rarities' in *British Birds* and elsewhere; at the time of his death, Jeffery was about to complete a book on the subject which will be published posthumously. Jeffery was also part of the editorial team of a new *Birds of Kent*, which will be dedicated on publication to him and to Dick Homes, another of the editors who also died in 1978 (*Brit. Birds* 71: 532-534).

Surely Jeffery's greatest memorial will be the reserve he constructed from scratch at gravel pits excavated on the outskirts of Sevenoaks. He, his family and friends created there a tremendously rich area for birds, basically from very little. Here was Jeff at his most enthusiastic: a one-man conservation dynamo, bubbling over with ideas, galvanising others to work in cold mud and water in all weathers, landscaping, planting appropriate wildfowl food plants, adding hundreds—if not thousands—of trees for shelter, Siskin- and Redpoll-fodder, and beauty. Here he functioned as ecological engineer, reserve warden, and navvy all at the same

time; and, in his lifetime, the alders reached 10 m and he saw the reserve attract, among the routine hordes of duck, some of those 'cream' birds that keep us all enthused: Ospreys, egrets—even Dalmatian Pelican! And he found time to run a successful Snipe-ringing programme, netting over specially constructed areas of the reserve. The Sevenoaks reserve lay behind his creation as an OBE for services to conservation, and is now a world-famous example of not just what-to-do but that it can be done, and most successfully.

On the day he died, Jeffery was out early (and that meant *early*) with his family under the wide skies over the islands in the south Medway. It is fitting that his last field trip should have been to an area that he knew and loved so well, and did so much both to understand and to protect for those of us who remain to enjoy. Knowingly or not, we shall all miss this man. To Pamela, Guy and Judy we extend our warmest sympathy.

JIM FLEGG

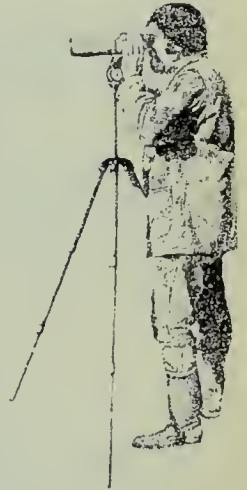
Notes

Opportunistic predation of Manx Shearwaters by fox

On 30th June 1977, while walking along the coastal path near Martins Haven, Dyfed, I came across several groups of black and white feathers. All appeared to have been snapped off at the quill end (not plucked out neatly as one would expect from predation by a bird of prey). Some 20 m down the bracken-covered cliff top I discovered the corpse of a Manx Shearwater *Puffinus puffinus* with the head missing, but the wings, the tail and one leg present; 5 m farther there was a second Manx Shearwater corpse and then two more, although there is no breeding colony in the area. I then discovered the earth of a fox *Vulpes vulpes* with six entrance holes, and in the mouth of one hole I picked up two scats: one contained a number of dark and white feathers similar to those on the path. I sent the scats to R. J. C. Page of the Ministry of Agriculture, Fisheries and Food, Pest Infestation Control Laboratory, Worplesdon, Guildford, Surrey. Mr Page and his colleague N. Horton confirmed that the specimens were fox scats, and microscopic examination showed that the feather remains in them were of Procellariiformes. The dark brown or blackish colouring of the feathers, and their size, would rule out the other common members of this order, and the evidence points decidedly to their belonging to Manx Shearwaters. The shearwaters were possibly prospecting or perhaps individuals lost in adverse weather conditions en route to or from the nearby breeding colony on Skomer. The fox would seem to have taken advantage of an unexpected source of food.

T. R. CLEEVES

Hilbre Island, c/o West Kirby Post Office, West Kirby, Wirral, Merseyside



Shag swallowed by monkfish In mid May 1977, while fishing off the Fastnet Rock, Co. Cork, J. O. Driscoll, J. Donovan and J. Leonard,

crewing the trawler *Ard Casta*, found a live monkfish *Squatina* almost 1 m long among their catch. On killing it, they discovered that it contained the corpse of a Shag *Phalacrocorax aristotelis*. Since the bird was recognisable, it seems that it had not long been inside the fish. The monkfish, a bottom-living shark, can grow to over 2 m in length, with a weight of 80 kg, and has a mouth 30-40 cm in width.

Dr Paul Hillis of the Irish Department of Fisheries informed me (verbally) that he had not heard of the monkfish preying on seabirds, but that it was not at all uncommon for the bottom-living angler *Lophius piscatorius* to eat Cormorants *P. carbo* and auks (Alcidae).

L. J. DAVENPORT

68 First Avenue, Gillingham, Kent

The most voracious fish predators of birds seem to be the pike *Esox lucius* in fresh water and the angler in salt water, but the monkfish was not mentioned by Dr James M. Harrison in his review of the subject (1955, Fish and other aquatic fauna as predators of birds, *Bull. Brit. Orn. Cl.* 75: 110-113). EDS

Grey Partridges in holly tree At about 09.30 GMT on a bright morning in mid November 1976, I walked out of my door at Tibbits Farm, Nethercote, Warwickshire, and was amazed to see a covey of ten or 11 Grey Partridges *Perdix perdix* fly from a holly tree *Ilex aquifolium* about 4 m from me and land about 100 m away. The holly had been heavy with berries on the previous night, but it was now almost bare; I cannot, however, say for certain that it was the partridges that ate the berries.

C. ALDERSON-SMITH

Tibbits Farm, Nethercote, near Rugby CV23 8AS

Moorhen's rapid construction of brood nest Late one evening in early August 1977, on a tributary of the River Nadder at Wilton, Wiltshire, I watched through binoculars from about 30 m while a Moorhen *Gallinula chloropus* built a brood nest. It pulled down rushes with its beak and completed the whole operation in about ten minutes. Immediately the platform was ready, the brood of tiny chicks rushed on to it.

GLENDEVON

Durham House, Durham Place, London SW3

Nicholas Wood has commented that this observation is of particular interest since the method of construction and the time taken to complete the operation do not seem to have been recorded previously. EDS

Distinctive feeding action of Lesser Golden Plover Douglas Page (*Brit. Birds* 71: 78-79) described interesting and distinctive feeding action of two Baird's Sandpipers *Calidris bairdii* in Leicestershire and the Isles of Scilly in 1977, and, in the accompanying editorial comment, P. J. Grant welcomed publication of such observations to stimulate the study needed to solve the identification of this difficult group. The criteria may, however, perhaps also be applied to other waders. For instance, I was shown two Lesser Golden Plovers *Pluvialis dominica* on high ground on

St Mary's, Isles of Scilly, on 1st October 1973 (*Brit. Birds* 67: 320); they were in the company of 13 Golden Plovers *P. apricaria* in a small arable field, and I watched them sporadically over a period of two days. Their method of feeding was in marked contrast to that of their companions: whereas the Golden Plovers obtained edible items without much disturbance of surface soil, the Lesser Golden Plovers found their food in a more forceful manner. Recalling Turnstones *Arenaria interpres*, but with slow side-to-side head movements, small clumps of earth were pushed aside. They repeatedly and invariably fed in this way, so that it was possible to pick them out and identify them among the small flock by their distinctive feeding action, without resorting to plumage or structural characters.

BERNARD KING

Gull Cry, 9 Park Road, Newlyn, Penzance, Cornwall

D. I. M. Wallace has noted that a Lesser Golden Plover on St Agnes, Isles of Scilly, in 1962 fed voraciously on earthworms, with much digging out. This, however, is apparently atypical: Will Russell has commented that, 'The described behavior is not typical. Lesser Golden Plovers, like most plovers, usually walk rapidly and then, rather stiffly, pick food items off the surface. They are more usually found in short grass, but will take to plowed fields especially late in the fall. I cannot find reference to systematic Turnstone-like feeding and I believe I would have noticed it if the behavior was normal.' Further comments will be welcomed. Eds

Partially leucistic Starling resembling Rose-coloured Starling

During the summer of 1970, I saw a partially leucistic Starling *Sturnus vulgaris* several times in the King Street area of Aberdeen, Grampian. Its head, wing and tail feathers were coloured as those of a normal Starling, but its mantle, scapulars, back, rump, breast, belly and flanks were a uniform, pale creamy-buff. Superficially, the bird bore a striking resemblance to a Rose-coloured Starling *Sturnus roseus* (plate 28), although

28. Left, Rose-coloured Starling *Sturnus roseus*, Grampian, October 1976 (*Brit. Birds* 71: 523) (Alan G. Knox)

29 & 30. Below, partially leucistic Starling *Sturnus vulgaris* with normal Starlings. Grampian, August 1971 (Alan G. Knox)



when examined closely it completely lacked the jizz and structural features of the latter species. Apart from its plumage, it was in every way like a typical Starling. It was presumably the same bird which reappeared in August 1971, but there were then a few dark feathers scattered through the pale ones of the upperparts and underparts (plates 29 & 30). The occurrence of this apparently atavistic individual (see *Ardeola* 21: 955-976) highlights the need to consider carefully any 'Rose-coloured Starling' which is only weakly coloured.

ALAN G. KNOX

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ABQ 2TN

A grey Yellowhammer On 20th June 1976, at Scalby Mills, near Scarborough, North Yorkshire, I came upon a bunting with a medium grey head and breast, darker face 'bridles', rusty rump, and white in the outer tail feathers. Although it had the jizz of a Yellowhammer *Emberiza citrinella*, glimpses of its foreparts as it fed on a manure heap suggested Rock Bunting *E. cia*. Better views subsequently showed that it was only an aberrant Yellowhammer. It completely lacked any yellow pigment in its plumage, the head and underparts being wholly dull bluish-grey, with no sign of any rufous. The upperparts were as a normal Yellowhammer, although the brown parts of its plumage were rather colder in shade; there was no indication of soiling or discoloration of the plumage due to unnatural causes. The bird was with a small party of Yellowhammers, which it resembled closely in shape and size, and no calls, other than those typical of Yellowhammer, were heard when the flock was flushed.

S. C. MADGE

2 Springholme, Caudle Hill, Fairburn, Knottingley, West Yorkshire WF11 9JQ

Fifty years ago . . .

'GARGANEY IN WORCESTERSHIRE On September 22nd, 1928, I put up a Garganey (*Anas querquedula*) . . . with some Teal at the Upper Bittell reservoir. On September 26th there was no sign of it. H. G. ALEXANDER.' (*Brit. Birds* 22: 214, February 1929)

Reviews

Wild Geese. By M. A. Ogilvie. T. & A. D. Poyser, Berkhamsted, 1978. 350 pages; 16 colour plates; 45 black-and-white illustrations; 40 maps; 41 tables. £7.80.

I strongly recommend this book to anyone who is interested in wildfowl, especially the true geese which are the subjects of Malcolm Ogilvie's latest meticulous work. It is a fitting and logical follow-up to his *Ducks of Britain and Europe* (1975, from the same publishers), and in my opinion is much better—but I do admit to a certain goose bias. Poyser's production is up to the high standard now expected from this publishing house and my only criticism is that some of the colour plates have not come out very true, at least in my copy. For example, it is difficult to separate pinks from oranges in a couple of plates, which is unfortunate as these colours in the soft parts of some of the *Anser* geese are important identification features.

Malcolm Ogilvie's text is clearly written and scholarly, drawing on over 1,000 references, 200 of which are listed in a very useful bibliography. Nevertheless, the author

rely heavily on his own experience, which is clearly extensive. The book is made up of eight main sections: Introduction and classification; Identification; Ecology, food and feeding; Breeding; Counting, ringing and population dynamics; Distribution and status; Migration; and Exploitation and conservation. These chapters are systematic and well laid out and, in spite of the lack of species-by-species treatment in the third, fourth and fifth chapters, it is possible to look up any particular point with the help of the comprehensive index. Tables are liberally used and are very clear and relevant to the text. There are also 40 maps, mainly showing distribution of the various species. Unfortunately, these are not listed at the front of the book along with the list of tables, and I personally do not see why such maps could not be more precisely drawn, especially in the larger scale ones, where I would like to be able to locate goose haunts precisely.

The illustrations by Carol Ogilvie, the author's wife, are an important part of the book. The colour plates are very comprehensive and show all the geese and many of their subspecies in profile on the ground and in flight, with upper and under surfaces of wings displayed. First-winter plumages are included, as are all downy goslings. There are also useful plates showing close-up heads of most of the grey geese, and ageing and sexing characters. I find the many black-and-white illustrations scattered throughout the book both attractive and informative, showing various geese in many typical situations. The Canada Goose on page 319, however, seems to have double its normal number of flight feathers!

With 350 pages printed on high quality paper, the many illustrations, tables and maps, and a clearly written and authoritative text by an acknowledged goose expert, *Wild Geese* must be extremely good value at £7.80.

O. J. MERNE

British Thrushes. By Eric Simms. Collins, London, 1978. 304 pages; 24 black-and-white plates; many maps, figures and line-drawings. £6.50.

The appearance of another in the valuable 'New Naturalist' series is always a welcome event. This, the sixty-third in that remarkable series, maintains the high standard of presentation, with readable print, well chosen and well reproduced photographs, and typically attractive Gillmor drawings.

Although concentrating on our commonest thrushes—with three chapters devoted to Song Thrush and Mistle Thrush, Blackbird and Ring Ouzel, and Redwing and Fieldfare—the last two chapters are concerned with 'Britain's vagrant thrushes' and 'The small chat-like thrushes of the British Isles'. Siberian Rubythroat, Rufous Bush Robin and Isabelline Wheatear seem a little out of place in a survey of British thrushes, to say nothing of Hermit Thrush and Vccry. These 29 peripheral species receive an average of under two pages each: the consequent superficial treatment fits ill with the book's 13 other chapters, where the relevant literature appears to have been very thoroughly scoured and interestingly summarised.

Thrushes are attractive and conspicuous, so it is hardly surprising that they have been chosen for study by a number of researchers. *British Thrushes* has much to live up to, as part of a series of studies of groups of species which started in 1972 with Dr Ian Newton's *Finches*. Collectors of 'New Naturalists' and thrush aficionados will be grateful to Eric Simms for his industry.

J. T. R. SHARROCK

Letters

The use of flash in bird photography I sympathise with R. A. Hume (*Brit. Birds* 71: 422) regarding the indiscriminate use of flash on diurnal birds in instances where the background cannot be properly illuminated and a false nocturnal effect is created. Indeed, for at least 20 years I have been drawing attention to the undesirability of such distortions and a section is devoted to this problem—and ways of avoiding it—in my book *The Technique of Bird Photography* (1956, and all subsequent editions). The difficulties are compounded when using colour because of the impossibility

of making corrections during processing. In some situations involving flying birds, a truly natural representation using flash is impossible or impracticable.

JOHN WARHAM

Zoology Department, University of Canterbury, Christchurch 1, New Zealand

Head pattern of Hippolais warblers The letter by Mark Beaman and Martin Woodcock (*Brit. Birds* 71: 546) seemed to give a useful identification feature for Booted Warbler *Hippolais caligata*, but I was surprised to note that the photograph of one in the same issue (plate 201) appears not to conform to their description, seeming to show a quite bold, dark eyestripe both in front of and behind the eye.

S. J. M. GANTLETT

10 Hardy Close, Thetford, Norfolk

Further, the head pattern of the Shetland individual of August-September 1976 (*Brit. Birds* 70: plate 116) seems similar to the one there in 1977 (71: plate 201) mentioned by Mr Gantlett. We welcome further comments and, particularly, photographs of Booted and other *Hippolais* warblers, which we hope to be able to combine into an identification feature on this genus. Eds

Habitat preference of migrant Dusky Warbler Douglas Page (*Brit. Birds* 71: 183) correctly pointed to the fact that the Dusky Warbler *Phylloscopus fuscatus* at Flamborough, North Humberside, in late September 1976 fed freely in the tree canopy. It did not, however, find its own way there. It was first discovered in the knee-length dense cover of grasses (Gramineae), bracken *Pteridium aquilinum* and other perennials in a cliff gully, among which it remained low, creeping about like an irascible mouse.

The Dusky Warbler reached its second location, at South Landing, in a carefully held bag, whence, via one pair of hands, it flew off to the sycamores *Acer pseudoplatanus*, ignoring the dense lower growth of the hanging valley. This behaviour surprised us, and many observers owe their first sight of the species to this bird's persistent canopy-feeding. From our knowledge of Dusky Warbler and Radde's Warbler *P. schwarzi*, it seems clear that—just as certain normally arboreal *Phylloscopus* warblers feed on the ground or in low cover on migration and in winter—both these species will occasionally do the reverse. Indeed, Radde's Warbler has been seen feeding persistently in the canopy of birches *Betula*, 2-4 m above the ground in Norfolk (D. J. Britton *in litt.*).

P. A. LASSEY and D. I. M. WALLACE

21 Southsea Avenue, Flamborough, North Humberside

Photographic requests

This list updates the one published in December (*Brit. Birds* 71: 601), when we explained our reasons for periodically publishing these requests

to photographers. We especially require good quality black-and-white prints of the following species:

Soft-plumaged Petrel <i>Pterodroma mollis</i>	Eagle Owl <i>Bubo bubo</i>
White Pelican <i>Pelecanus onocrotalus</i>	Hawk Owl <i>Surnia ulula</i>
Purple Heron <i>Ardea purpurea</i>	Pygmy Owl <i>Glaucidium passerinum</i>
Surf Scoter <i>Melanitta perspicillata</i>	Ural Owl <i>Strix uralensis</i>
Honey Buzzard <i>Pernis apivorus</i>	Great Grey Owl <i>S. nebulosa</i>
Tawny/Steppe Eagle <i>Aquila rapax</i>	Tengmalm's Owl <i>Aegolius funereus</i>
Imperial Eagle <i>A. heliaca</i>	Nightjar <i>Caprimulgus europaeus</i>
American Kestrel <i>Falco sparverius</i>	Pallid Swift <i>Apus pallidus</i>
Hobby <i>F. subbuteo</i>	Wryneck <i>Jynx torquilla</i>
Spotted Crake <i>Porzana porzana</i>	Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>
Little Crake <i>P. parva</i>	Woodlark <i>Lullula arborea</i>
Baillon's Crake <i>P. pusilla</i>	Citrine Wagtail <i>Motacilla citreola</i>
Semipalmated Plover <i>Charadrius semipalmatus</i>	Dipper <i>Cinclus cinclus</i>
Lesser Sand Plover <i>C. mongolus</i>	Dunnock <i>Prunella modularis</i>
Greater Sand Plover <i>C. leschenaultii</i>	Siberian Rubythroat <i>Luscinia calliope</i>
Semipalmated Sandpiper <i>Calidris pusilla</i>	Hermit Thrush <i>Catharus guttatus</i>
Western Sandpiper <i>C. mauri</i>	Moustached Warbler <i>Acrocephalus melano-</i>
Red-necked Stint <i>C. ruficollis</i>	<i>pogon</i>
Little Stint <i>C. minuta</i>	Blyth's Reed Warbler <i>A. dumetorum</i>
Temminck's Stint <i>C. temminckii</i>	Olivaceous Warbler <i>Hippolais pallida</i>
Long-toed Stint <i>C. subminuta</i>	Booted Warbler <i>H. caligata</i>
Least Sandpiper <i>C. minutilla</i>	Upcher's Warbler <i>H. languida</i>
Woodcock <i>Scolopax rusticola</i>	Olive-tree Warbler <i>H. olivetorum</i>
Red-necked Phalarope <i>Phalaropus lobatus</i>	Icterine Warbler <i>H. icterina</i>
Grey Phalarope <i>P. fulicarius</i>	Melodious Warbler <i>H. polyglotta</i>
Pomarine Skua <i>Stercorarius pomarinus</i>	Greenish Warbler <i>Phylloscopus trochiloides</i>
Arctic Skua <i>S. parasiticus</i>	Arctic Warbler <i>P. borealis</i>
Long-tailed Skua <i>S. longicaudus</i>	Firecrest <i>Regulus ignicapillus</i>
Great Skua <i>S. skua</i>	Crested Tit <i>Parus cristatus</i>
South Polar Skua <i>S. maccormicki</i>	Isabelline Shrike <i>Lanius isabellinus</i>
Gull-billed Tern <i>Gelochelidon nilotica</i>	Spanish Sparrow <i>Passer hispaniolensis</i>
Lesser Crested Tern <i>Sterna bengalensis</i>	Hawfinch <i>Coccothraustes coccothraustes</i>
Black Tern <i>Chlidonias niger</i>	Cape May Warbler <i>Dendroica tigrina</i>
Scops Owl <i>Otus scops</i>	Pallas's Reed Bunting <i>Emberiza pallasi</i>

Please send prints for consideration to the editorial address: *British Birds*, Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

Requests

Leach's Petrels in autumn 1978 Large numbers of Leach's Petrels *Oceanodroma leucorhoa* were recorded in Britain, particularly on the Merseyside coast, in autumn 1978. All observations in Britain and Ireland during the period 1st September to 30th November, including reports from inland and of dead or dying petrels, are required for a paper documenting the 1978 events and comparing them with other large movements and wrecks earlier this century and in the 19th century. If possible, details should include the number seen, direction of movement, time of observation, date and locality. All correspondents supplying records will be acknowledged; please send information to T. R. Cleeves, Hilbre Island, c/o West Kirby Post Office, West Kirby, Wirral, Merseyside.

Goosander moulting grounds Studies of Goosanders *Mergus merganser* in Northumberland have shown that the drakes leave the breeding areas in late May/early June and presumably go to their moulting grounds. Only three moulting flocks are currently known in Britain (in the Bcauly Firth and in Longman Bay and Spey Bay on the Moray Firth) and the belief is growing that many British drakes may move to northern Scandinavia to moult. We should, therefore, appreciate information on any moulting concentrations within Britain and Ireland, other than those listed above. Please send details to E. R. Meck and B. Little, 10 Shaftoe Way, Dinnington, Newcastle-upon-Tyne.

Wing-tagged Hen Harriers Since 1975, Hen Harriers *Circus cyaneus* in Orkney have been marked with small plastic wing-tags. Young have been marked with numbers on orange, yellow, pale-green and white tags; adults have been given individual colour combinations on white, yellow, pale-green and red backgrounds. Many of the harriers probably cross to the mainland, particularly in winter, and some may stay to nest. Anybody observing one of these birds is asked to note its sex and, if possible, the colour of the tag. Reports, which will be acknowledged, should be sent to N. Picozzi, Institute of Terrestrial Ecology, Blackhall, Banchory, Kincardineshire AB3 3PS.

Raptor and owl research register There has long been a need to develop some means by which the many scattered field workers on raptors (Accipitriformes and Falconiformes) and owls (Strigiformes) can be contacted by the conservation agencies when necessary. Further, studies by isolated workers could clearly benefit enormously by comparison and co-operation with others. To foster these aims, the BTO is supporting a register of research on birds of prey and owls. Research is given a wide interpretation: any systematic study of any aspect of the biology of birds of prey or owls. Full details and registration cards are available from C. R. Tubbs, c/o Nature Conservancy Council, Shrubbs Hill Road, Lyndhurst, Hampshire SO4 7DJ.

News and comment

Peter Conder and Mike Everett

National Cage Bird Show The 35th National Exhibition of Cage and Aviary Birds, held from 1st to 3rd December 1978, filled the Great Hall at Alexandra Palace to capacity. This annual show is the largest exhibition of cage birds held in Britain and includes much to fascinate and delight birdwatchers and identification specialists. It is a pity perhaps that so few field men go to it: presumably the BTO Conference occurring at the same time keeps them away. The 'Special Award' this year was presented to the proud owner and breeder of a pair of Siberian Thrushes *Zoothera sibirica*, giving us a rare opportunity to see this almost mythical species, even if it was through the bars of a cage. Another interesting exhibit was a hybrid Green Singing Finch × Border Canary which so closely resembled a Serin *Serinus serinus* that, had it been seen in the wild, it would have fooled all but the most astute observer. The trade stands contained fewer large macaws

than in the past—perhaps indicating the increasing rarity of these birds in their native South America. A large cage full of Rose-coloured Starlings *Sturnus roseus*, however, showed that this species is now being imported regularly. Red-headed *Emberiza bruniceps* and Black-headed Buntings *E. melanocephala*, both of which were seen in their hundreds a few years ago, were surprisingly absent from the stands: perhaps some seen in the wild recently were not of captive origin after all? The British Section contained large numbers of the usual finches, but the numbers and variety of other species were down in comparison with previous years. Despite the known successes of aviculturalists in breeding British birds, the sight of a pair of Lesser Whitethroats *Sylvia curruca* in a cage somehow still offends the eye: a peculiar sentiment for us to have in a way, when we consider that the majority of foreign birds on show had been trapped in the wild in

their countries of origin, unlike the British ones. (Contributed by Stuart Housden)

ITE Report *The 1977 Annual Report of the Institute of Terrestrial Ecology* is now available from HM Stationery Office, price £4.00. One of the most interesting features in it is a Project List. Quite apart from various general ecological investigations which involve birds, and the ornithological content which must exist in some of the listed current recording and data collection schemes, it is encouraging to note that this arm of the Natural Environment Research Council is involved in no fewer than 30 projects involving birds.

Good news for Audouin's Gull We hear that proposals arising from a recent World Wildlife Fund sponsored survey of Audouin's Gull *Larus audouinii* in the western Mediterranean include legal protection and a series of sanctuaries along the coast of Spain and on its breeding islands. This bird, still the only full species in Europe with an entry in the IUCN's Red Data Book, is in need of protection from hunting pressures and from egg-collectors (both those who eat the eggs and those who simply drool over them). The survey also reveals that more than 1,000 pairs have been located in the western Mediterranean: not long ago, estimates for the entire Mediterranean population were around this number.

Turkish Bird Report The fourth Turkish Bird Report by the Ornithological Society of Turkey, covering 1974-75, is now available, price £4.00, from that society's successor, the Ornithological Society of the Middle East, c/o RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL. Further news on Turkey is promised in future OSME publications, continuing the excellent accounts on the country's avifauna which OST has produced during the last decade. Incidentally, the Report tells us that the new society's boundaries have deliberately been kept vague, but will include the huge area extending from Turkey and Libya in the west to Afghanistan and Pakistan in the east, and from the Black and Caspian Seas in the north to the Sudan, Ethiopia and the Arabian peninsula in the south. Once again, we urge all *BB* readers with an interest in this fascinating region to support the OSME by becoming members.

Hawk Trust One-day Conference The Hawk Trust held a conference at the Zoological Society of London's Regents Park headquarters on 4th November 1978. This provided an opportunity for people interested in various aspects of raptor work—including falconers—to get together, as well as giving us a most interesting formal session of papers and short communications connected mainly with behavioural ecology. The main lectures were by Nick Picozzi on polygyny in Orkney Hen Harriers *Circus cyaneus*, by Douglas Weir on patterns of predation by Highland Peregrines *Falco peregrinus*, by A. R. Hardy on territories and feeding ecology of a farmland population of Tawny Owls *Strix aluco*, by D. C. Houston on the role of vultures as scavengers, and by N. Fox on the hunting strategies of various raptors. If the attendance on this interesting day was rather small, the availability of the topics described has been guaranteed: proceedings will be available shortly and fuller details can be had from the Hawk Trust, PO Box 1, Hungerford, Berks RG17 0QE.

Biggest fine yet At Kirkby Lonsdale Magistrates' Court on 30th November 1978, John Lund of Oldham was fined £900 with £120 costs for taking three Peregrines' eggs: the largest fine to date under the Protection of Birds Acts and, hopefully, a sign that the courts are at last beginning to sit up and take notice. In Lund's case, the fact that he had a previous conviction for a similar offence presumably had some bearing on the size of his fine this time. The RSPB's Investigations Department were well pleased with the outcome of this case, which was in effect the second happy ending to this particular story. When recovered, the eggs were in an incubator and, later, two of them actually hatched in Peter Robinson's office at The Lodge, giving some of us the chance to witness a really exciting event. One of the chicks died, but, thanks to the prompt action of the RAF, who laid on a helicopter at very short notice, the other was flown to Scotland, where it was placed in an occupied eyrie. Its foster-parents took to it right away and, in due course, one of the most widely-travelled young Peregrines in the country fledged successfully.

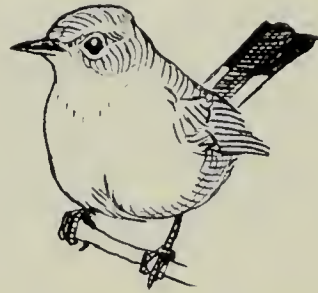
BTO Conference Despite the snow outside, the atmosphere within the Conference Centre at Swanwick was warmed by en-

counters with old friends and with the ample food and drink provided by Wally Milne's efficient and helpful staff. An almost continuous and diverse series of lectures provided ideas, information and the very human pleasure of comparing the qualities of various speakers. In this last regard, the Trust's new Director, Ray O'Connor, won top marks with a presentation that was both unusually technical and easy to follow: it also showed us what possibilities exist to gain new knowledge from the BTO's vast collection of data. While some pursued intellectual pleasures, others relaxed to swap stories and to buy books and pictures. For many of us, the excellent disco provided more strenuous exercise than a fortnight's birding in Morocco, and we variously hobbled or staggered to bed sometime after 4 a.m. Once again, congratulations and thanks to the BTO staff, who organised affairs unobtrusively and well to provide such a pleasant and stimulating weekend. (Contributed by John Andrews)

The traditional *British Birds* mystery photograph competition attracted 63

entries. The species shown in the five photographs were correctly named by 11 people: David Bates, Stan Davies, Nick Dymond, David Fisher, Chris Harbard, David Hunt, Tim Inskipp, Andy Lowe, John Marchant, Steve Rooke and Alan Walker. In the draw, John Marchant won the prize of a bottle of champagne.

Red-breasted Flycatcher goes west Dr Jørgen Rabøl, whose interest in reverse migration is well known, writes from the Canary Islands to tell us of a first-winter Red-breasted Flycatcher *Ficedula parva* there on 11th November. As he comments: 'The southernwesternmost ever?'



Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

S. C. Madge and K. Allsopp

These are largely unchecked reports, not authenticated records

This report covers November; except where otherwise stated, all dates refer to November.

The anticyclonic weather continued through November, producing a mild southerly or westerly airstream. The high pressure system in the mid North Atlantic finally moved east to Scandinavia, with ensuing very cold northerly winds from 25th onwards.

Waterfowl

Draycote Reservoir (West Midlands) is rated as the best birdwatching locality in the Midlands and it certainly keeps us well supplied with interesting records: during the month it was possible to get a taste of the sea there, with single **Great Northern Diver** *Gavia immer*, **Eider** *Somateria mollissima* and **Common Scoter** *Melanitta nigra* present at the same time, and **Ferru-**

ginous Duck *Aythya nyroca* and **Grey Phalarope** *Phalaropus fulicarius* thrown in for good measure on 16th. There had been another **Great Northern Diver**, in almost full breeding plumage, at Pennington Flash (Lancashire) on 25th October, but it left later in the day after being persistently harried by Black-headed Gulls *Larus ridibundus*. On 30th October, a drake **Velvet Scoter** *M. fusca* made a brief visit to Fairburn Ings (North Yorkshire); presumably this was the same one that appeared at Eccup Reservoir (West Yorkshire) on the following day for a fortnight's stay. After the influx of **Ring-necked Ducks** *A. collaris* into Britain and Ireland during the 1977/78 winter, it was predictable that some would reappear at the same new localities this winter; so far, we have heard that the Hornsea Mere/Top Hill Low (Humberside) and Little Paxton

(Cambridgeshire) birds have turned up: doubtless others will also as the winter progresses. Many ducks had been on the move down the East Coast in late October, and a remarkable local build-up of **Pin-tails** *Anas acuta* had taken place at Hornsea Mere, with a peak count of 125 in early November. A party of 12 **Barnacle Geese** *Branta leucopsis* was noted at Donna Nook (Lincolnshire) on 12th. Perhaps the most interesting duck of the autumn, however, has been the **Red-crested Pochard** *Netta rufina*, with quite an influx during October and November. We have heard of at least four on reservoirs in the Bristol (Avon) area, singles at Eyebrook (Leicestershire) and Brinsley Flashes (Derbyshire), two at Rutland Water (also Leicestershire) and, as a reward for being constantly chained to the *BB* office, the editor was able to watch a pair on Blunham Gravel-pits (Bedfordshire) from his study window on 9th: compensation for seeing no Ospreys *Pandion haliaetus* flying past this year!

Herons, storks, crakes and waders

A first-winter **Spoonbill** *Platalea leucorodia* stayed at Hunterston (Ayrshire) from 8th to 26th and the **Crane** *Grus grus* which appeared on the Ythan (Aberdeenshire) in April was still present throughout November. Two **White Storks** *Ciconia ciconia* were recorded flying south over Walberswick (Suffolk) on 28th October, and a very

late **Purple Heron** *Ardea purpurea* at Elmley (Kent) on 13th. A **Spotted Crake** *Porzana porzana* was noted at Attenborough (Nottinghamshire) on 15th October and one found dead at Loch of Strathbeg (Aberdeenshire) on 12th. Another **White-rumped Sandpiper** *Calidris fuscicollis* appeared, this time at Benacre (Suffolk) on 23rd October, staying until 5th, although it is unlikely that this was a fresh arrival: it could well have come about a month earlier, along with the main influx, and been on the move on this side of the Atlantic.

Seabirds

The cold, northerly winds in the last few days of the month produced some interesting seawatching, with reports of small numbers of **Little Auks** *Alle alle* and **Grey Phalaropes** from regular watch points on the East Coast. On 26th, a late passage of displaced skuas was noted with a total of 11 **Pomarine** *Stercorarius pomarinus*, four **Arctic** *S. parasiticus* and 14 **Great Skuas** *S. skua* passing Holme (Norfolk). A **Long-tailed Skua** *S. longicaudus* was caught at Dungeness (Kent) on 29th, and a dead juvenile skua picked up inland at Stoney Middleton (Derbyshire) on 5th October also proved to be that species. The gull of the month was an **Ivory Gull** *Pagophila eburnea* at Bangor (Co. Down) on 26th, and yet another **Laughing Gull** *Larus atricilla*

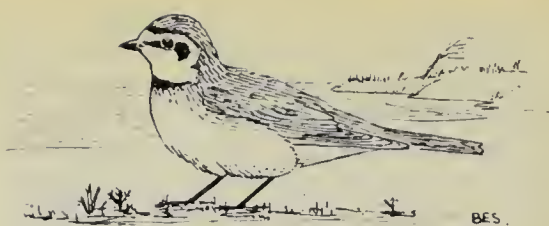
31. Red-crested Pochard *Netta rufina*, Essex, March 1973 (*G. St.J. Hollis*)



was discovered: an adult at the sewer outfall at Bridlington (Humberside) on 20th. Following our comment on inland records of **Mediterranean Gulls** *L. melanocephalus* (*Brit. Birds* 72: 52), we have heard of two more, both first-winters, from Chew Valley Lake (Avon) on 26th and Ogston Reservoir (Derbyshire) on 28th October.

Birds of prey

Good numbers of **Short-eared Owls** *Asio flammeus* continued to be reported from many areas and there were additional reports of **Rough-legged Buzzards** *Buteo lagopus* from the Isle of Sheppey (Kent) and, on 28th October, at Walberswick (Suffolk), although in general numbers of this species have been rather low so far this winter. **Merlins** *Falco columbarius*, however, seem to be in good numbers in places where they normally occur on passage, and a very late **Osprey** stayed on various reservoirs in Derbyshire through October, still being present at Errwood Reservoir on 4th. The only other out-of-place raptor of



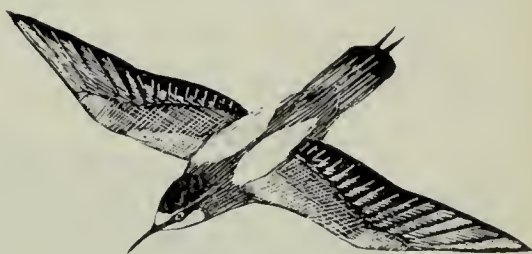
Eremophila alpestris were generally in low numbers at their traditional spots, so that the one which spent the first half of the month at Burnham-on-Sca (Somerset) is particularly noteworthy so far west. The **Wallcreeper** *Tichodroma muraria* was reported back in Cheddar Gorge (Somerset) at the end of October, for the third successive winter, but so far has proved to be very elusive. Almost as interesting has been the **Chough** *Pyrhocorax pyrrhocorax* which was noted with a party of Jackdaws *Corvus monedula* at Silecroft (Cumbria) in mid October. Also in Cumbria, there was a very late **Pied Flycatcher** *Ficedula hypoleuca* trapped at Walney Island on 27th October. **Firecrests** *Regulus ignicapillus* continued to be reported in good numbers in the south of England, with some penetrating as far north and inland as Nottinghamshire and Derbyshire. A number of belated reports reflect the ups and downs of the autumn, with quality not quantity in the way of odd passerines: another mainland **Booted Warbler** *Hippolais caligata*, at Sheringham (Norfolk) on 2nd October, a **Pallas's Warbler** *Phylloscopus proregulus* at Martlesham (Suffolk) on 13th October, another inland **Yellow-browed Warbler** *P. inornatus*, at Sevenoaks (Kent) on 8th October, and, on the following two days, a **Bee-eater** *Merops apiaster* at Loch Lomond (Stirlingshire).



note was a **Red Kite** *Milvus milvus* over Sileby (Leicestershire) on 26th.

Small landbirds

The last **Swift** *Apus apus* that we have heard of was over Burton (Lincolnshire) on 4th, and there was a **Swallow** *Hirundo rustica* (late for the far north) at Drums (Aberdeenshire) on the following day. Numbers of the scarcer winter passerines were low, with no **Waxwings** *Bombicilla garrulus* (as predicted by Geoffrey Acklam *in litt.* when none appeared in Norway in autumn 1978) and few **Great Grey Shrikes** *Lanius excubitor*. **Shore Larks**



Latest news

In first half of January: two **Rough-legged Buzzards** and one or two **Goshawks** *Accipiter gentilis* at Walberswick; **Greater Sand Plover** *Charadrius leschenaulti* still at Sidlesham (West Sussex); **Yellow-browed Warbler** at Titchfield Haven (Hampshire); some **Waxwings** at Norwich (Norfolk).

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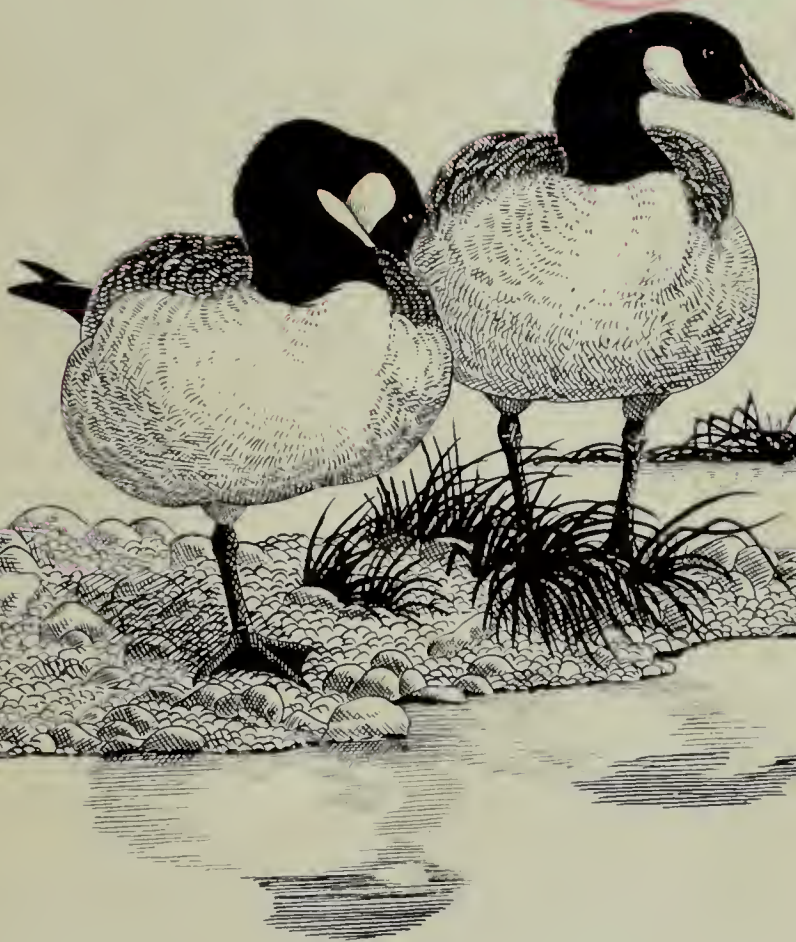
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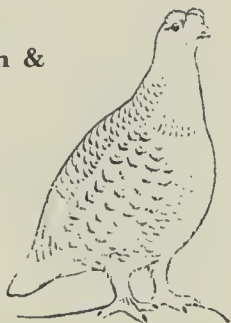
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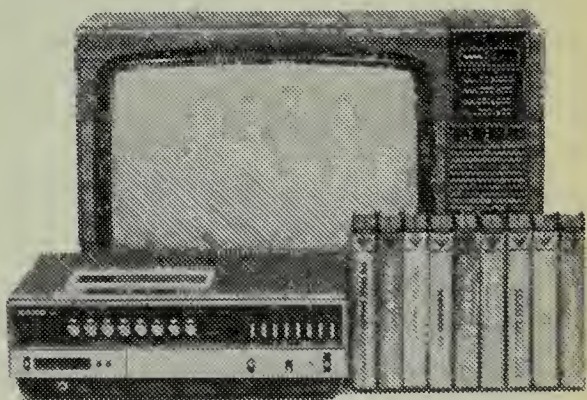
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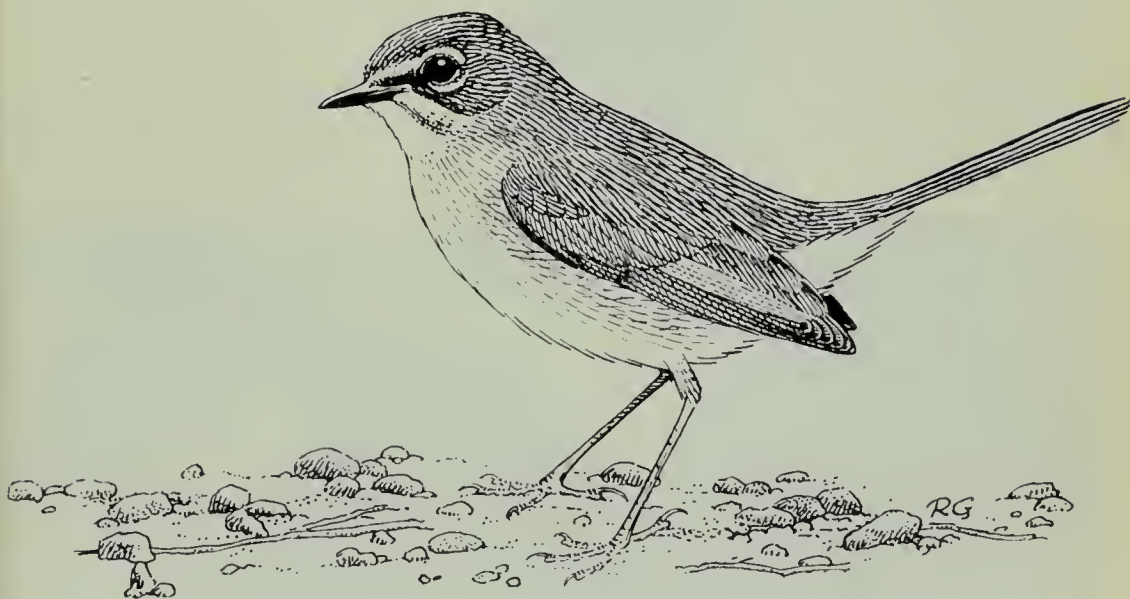
British Birds

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Siberian Rubythroat: new to Britain and Ireland

A. R. Lowe



On the morning of 9th October 1975, P. J. Roberts, S. G. D. Cook and I were returning to the bird observatory from the south end of Fair Isle, Shetland, when we came across a bird at the North Grind that was unfamiliar to us. It had the upright stance, long legs and chat-like shape of a Robin *Erithacus rubecula* or a Bluethroat *Luscinia svecica*, but appeared to be nearer to the size of a Nightingale *L. megarhynchos*. It fed on the ground and, as it ran about, its wings were held drooped and its longish tail was sometimes flicked up and held cocked. After several moments, we realised that the only species it could be was a Siberian Rubythroat *L. calliope*.

The upperparts were mid-brown, similar in colour to those of a Robin or a Nightingale. There was a noticeably more rufous panel on the remiges of the closed wings. The rump was also slightly rufous, contrasting with the brown of the back and tail. The breast and flanks were a warm creamy-buff, but the belly and vent were paler and whiter. There was a

32. Siberian Rubythroat *Luscinia calliope*, Shetland, October 1975
(S. G. D. Cook)



33. Siberian Rubythroat *Luscinia calliope*, Shetland, October 1975
(R. A. Broad)



very noticeable whitish throat which contrasted with the buff upper breast. The head pattern was striking: a distinct pale supercilium stopping just behind the eye, and a distinct eye-ring. The cap and the car-coverts were the same colour as the back, but the lores appeared darker, and there were dark moustachial and malar stripes. The legs appeared pinkish and the bill dark.

After we had been watching the bird for some time, R. A. Broad arrived; he observed it closely for some minutes and could also think of nothing else it could be except a Siberian Rubythroat. After one unsuccessful attempt, we trapped the bird in the nearby Plantation Trap. In the hand, the identification was verified beyond doubt when we saw that

the white throat patch had faint, smudgy traces of red which had not been visible in the field.

At the observatory, the bird was examined, described, photographed (see plates 32 & 33) and then released in the observatory garden, where Dr B. Marshall, D. Coutts, I. Sandison and others who flew across to Fair Isle from Mainland were able to see it in the late afternoon. It remained in the garden all the next day, and was last seen at Setter on 11th October.

The following details were noted in the hand:

UPPERPARTS Forehead and crown mid-brown, feathers with paler tips. Crown cut off by supercilium giving capped appearance. Mantle and scapulars warm mid-brown; uppertail-coverts rufous and rump slightly paler. Uppertail-coverts more rufous at tips and most feathers with some darker barring similar to fault barring. Tail rounded, grey-brown with rufous tinge, especially at bases of outer webs, similar in colour to Thrush Nightingale *L. luscinia*, but less intense; all feathers rather abraded, but showing paler central tip. Primaries, secondaries and tertials as tail, but slightly greyer, with broad rufous fringes; fringes almost absent on tertials. Primary and greater coverts; outer webs markedly rufous-chestnut, similar to fringes of primaries and secondaries. Small, pale, wedge-shaped tips to all greater coverts and pale tips to longest two primary coverts. Primary coverts with narrower and less rufous fringes than greater coverts. Alula as primary coverts, but with paler fringes to outer web. Median and lesser coverts showing more rufous tips.

HEAD Supercilium yellow-buff, becoming white above eye; quite broad and distinct from base of bill to above eye, indistinct, short, greyish-white continuation behind eye. Eye-ring almost complete. Malar region and lores rather speckled, grey-brown, flecked paler, especially towards base of bill. Ear-coverts as crown, contrasting with broadish, indistinct continuation of supercilium. Distinct dark khaki moustachial stripe, contrasting with throat and cutting off pale line in malar region.

UNDERPARTS Clear white semicircular area from chin to upper breast, with a few brown feathers and tips to a number of feathers at sides of throat showing pink similar to colour of breast of Redpoll *Carduelis flammea* of nominate race. Broad area of deep yellow-buff across lower breast. Belly almost silky-white, bases of some feathers showing greyish. Flanks dark olive-buff, contrasting with belly, and extending well down onto base of legs. Undertail-coverts off-white, with yellow-buff wash to all feathers, especially around vent. Underwing: greyish underside to flight feathers; coverts greyish, with yellowish wash.

BARE PARTS Bill typical *Luscinia*, with strong rictal bristles. Upper mandible blackish-grey; lower mandible similar, but pinkish-grey at base. Gape pale pinkish inside lower mandible, whitish inside upper mandible, although greyer at tip. Eye large; iris very dark brown-black. Legs tinged pinky-purple on sides, paler at rear; soles flesh-coloured; claws greyish.

MEASUREMENTS Wing 74 mm; wingpoint to tip of tail 53.5 mm; wingpoint to longest secondary 14.5 mm; bill 15.5 mm; tarsus 30 mm; tail 57 mm; weight 20.0 g.

WING FORMULA 1st primary 10 mm longer than primary coverts. 3rd and 4th longest; 2nd -7.5 mm; 5th -2 mm; 6th -5 mm; 7th -7.5 mm; 8th -10.5 mm; 9th -11.5 mm; 10th -13.5 mm; 3rd, 4th and 5th emarginated. Notch on 2nd 17.5 mm; on 3rd 17 mm; on 4th 13 mm.

The autumn of 1975 produced a record number of vagrants from Siberia in Britain and Ireland. Excluding the two commonest species—Richard's Pipit *Anthus novaeseelandiae* and Yellow-browed Warbler *Phylloscopus inornatus*—there was a total of 57 individuals of probable or certain Siberian origin reported in autumn and winter 1975 (Dymond *et al.* 1976; O'Sullivan *et al.* 1977). There were 29 Pallas's Warblers *P. proregulus*, four Lanceolated Warblers *Locustella lanceolata*, three Radde's

Warblers *P. schwarzi*, three Stonechats *Saxicola torquata* of one of the Siberian races *maura* or *stejnegeri* and one or two records of each of 13 other species (including the Siberian Rubythroat). Baker (1977) carried out an analysis of some of these occurrences. A putative Yellow-browed Bunting *Emberiza chrysophrys* (still under review) in Norfolk and a Siberian Blue Robin *Luscinia cyane* in the Channel Islands (Rountree 1977)—neither of which is included in the foregoing totals—were, with the Siberian Rubythroat on Fair Isle, the highlights of this exceptionally large influx.

Summary

A Siberian Rubythroat *Luscinia calliope* was identified and then trapped on Fair Isle, Shetland, on 9th October 1975; it was last seen on 11th October.

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Some notes on the Siberian Rubythroat

The very first issue of *British Birds* reported—but dismissed—the observation of two Siberian Rubythroats near Westgate-on-Sea, Kent, in early October 1900 (*Brit. Birds* 1: 8). Claimed occurrence in Poland (*Notaki Orn.* 10: 54) was not accepted by L. Tomiałojć (1972), but there are records from France (two, August 1829 and undated: Mayaud 1936), Italy (five, December 1886, October 1889, December 1898, March 1903 and December 1906: Arrigoni degli Oddi 1929), and Iceland (November 1943: Gudmundsson 1944), while Vaurie (1959) also noted that stragglers reached the Caucasus. Voous (1960) described the Siberian Rubythroat as 'a characteristic bird of the taiga' and its breeding distribution (fig. 1) as 'discontinuously east palearctic, in boreal climatic zones and mountain regions'. It is strongly migratory, wintering in southern Asia (from India to China), Taiwan and the Philippines. Thus, a fully documented vagrant record in Britain and Ireland comes as no great surprise.

With their large dark eyes and perky stance, the robins, nightingales, rubythroats and bluethroats in the closely related genera *Erithacus* and *Luscinia* are all very attractive and charming. In comparison with some of its relatives, the Siberian Rubythroat is almost soberly coloured, although the adult male (plate 34) has a beautiful crimson chin and throat (less orange, pinker and more restricted than the red on a Robin *E. rubecula*), contrasting with striking white supercilia and moustachial stripes. A captive male which the late Richard Richardson brought to a Bird Observatories Conference in Oxford in the early 1960s was greatly



34. Male Siberian Rubythroat *Luscinia calliope* with food for young, Amurland, USSR
July 1961 (Irene Neufeldt)

Fig. 1. Breeding distribution of Siberian Rubythroat *Luscinia calliope* (from Voous 1960)



admired and for a time made Siberian Rubythroat the number one target for wardens wanting to add a species to the British and Irish list.

Siberian Rubythroats are not uncommon in captivity in Britain (Tim Inskipp verbally). The Fair Isle individual, however, with the general appearance of a female, but traces of red on the throat, and pale tips to all the greater coverts, was probably a first-winter male (rather than an adult female) and, therefore, unlikely to have been an escape from captivity. Most autumn vagrants are immatures; late September and October is the usual time for far-eastern birds to occur in Britain and Ireland; and an Asiatic species could have chosen no better autumn than 1975 to support its claims for admissibility as a genuinely wild individual in western Europe. JTRS

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Identification of Olive-backed Pipit, Blyth's Pipit and Pallas's Reed Bunting

Alan R. Kitson



Three species which occasionally reach western Europe. Knowledge of their field characters may help us to increase the number of vagrancy records

This is the third and last of this series of papers based on observations in Mongolia in 1977. The general introduction to the series appeared with the first paper (*Brit. Birds* 71: 558-562).

Olive-backed Pipit *Anthus hodgsoni*

From mid May onwards, this species becomes common in Mongolia, inhabiting forests and the interface of forest and mountain steppe. The race concerned is *yunnanensis* (Vaurie 1959), to which Dennis (1967)

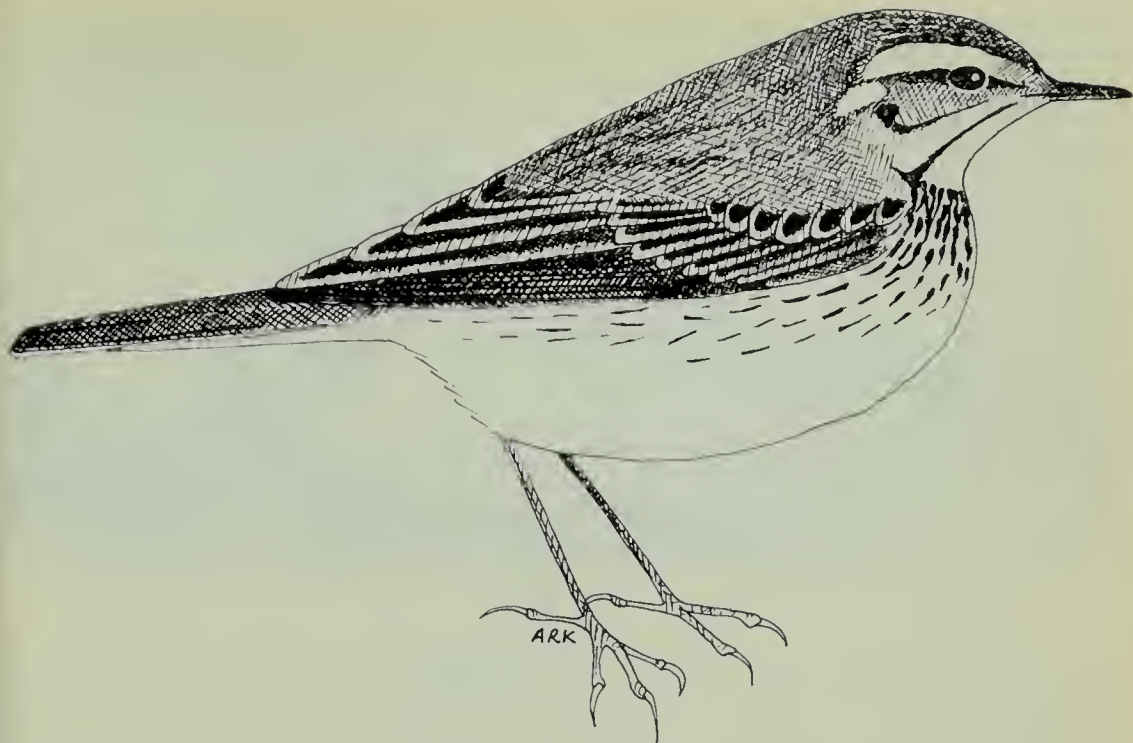


Fig. 1. Olive-backed Pipit *Anthus hodgsoni*, Mongolia, June 1977 (Alan R. Kitson)

tentatively assigned the two autumn vagrants on Fair Isle in 1964 and 1965. Olive-backed is easy to identify and, although this has been understood by those who have recently encountered it as an autumn vagrant in Britain, the diagnostic characters have not been properly analysed in any of the current field guides.

In size, Olive-backed is similar to Tree Pipit *A. trivialis*. It is definitely not smaller, as stated by Peterson *et al.* (1974). In stance and gait, Olive-backed again recalls Tree, but, even more than that species, it habitually wags—or, better, pumps—its tail. The movement is so pronounced that it recalls that of a wagtail *Motacilla*. Those in Mongolia, both migrants and breeders, were notably timid. When disturbed, they would fly up, calling loudly and scatter into the tree canopy, perching on boughs and even hiding in dense foliage. Such behaviour has been shown by at least two of the recent Olive-backed Pipits in Britain (D. I. M. Wallace *in litt.*).

As most texts point out (but few illustrations do justice to), Olive-backed is a beautiful bird, with obvious contrast between its dark olive-green and relatively unstreaked upperparts (with feather marks much reduced even compared with Tree) and its clean, mainly white underparts. The latter are suffused yellow-buff and heavily spotted black in front and streaked black along the lower flanks. It is, however, the head pattern that is most distinctive.

Crown basically olive, with heavy black flecking, and black line over supercilium. Supercilium obvious, buff-orange before and startlingly white behind eye: contrasting with dark eye-stripe which forms upper border to olive-brown cheeks and divides end of supercilium from obvious, white, drop-shaped mark on rear upper

car-coverts; last mark contrasts with noticeable black spot immediately below on rear ear-coverts which runs down around lower edge of cheeks. Combination of black-outlined white supercilium, white drop-like mark (appearing as broken end of supercilium) and black ear-spot unique among Palearctic pipits (see fig. 1).



35. Olive-backed Pipit *Anthus hodgsoni*, Mongolia, June 1977 (Alan R. Kitson)

Some photographs of vagrants recorded in Britain have not shown the 'supercilium drop' (see, for example, plate 20 in Dennis 1967), but I suspect that it was obscured by the positioning of the birds in the hand; it is well shown in Broad (1976), in R. A. Hume's sketch of the October 1976 individual in the Isles of Scilly reproduced in Conder (1979) and in my photograph of one in the field in Mongolia (plate 35).

The flight call of Olive-backed always reminded me of Tree and often also of Richard's Pipit *A. novaeseelandiae*. It was a hoarse 'tzee' or 'tzeep', much more striking than the thin, inflected call of Red-throated Pipit *A. cervinus*. It can sound surprisingly loud in close cover, even suggesting Redwing to some ears (D. I. M. Wallace *in litt.*).

Blyth's Pipit *Anthus godlewskii*

From mid May onwards, this pipit became common around Ulan Bator and was common in the Hangai in June, inhabiting dry, grassy hillsides. I found Richard's Pipit *A. novaeseelandiae* of the eastern race *dauricus* (Vaurie 1959) in the last few days of May at Ulan Bator and in June farther down the Toal Valley, confined to the rank vegetation of marshes and wet flashes below the habitat of Blyth's, from which it is clearly ecologically separated. Drawing upon this fortunate chance to compare them, I am able to comment on their differentiation in Mongolia.

Blyth's is the same size as or slightly smaller than Richard's, usually assuming a less upright posture, appearing shorter-legged, but not showing in the field the slightly finer and less thrush-like bill obvious in skins. Occasionally, my patient use of a telescope made visible the short hind-toe claws of Blyth's and, more obviously, the ridiculously long hindtoe claws of Richard's.

In plumage, Blyth's appeared almost identical to Richard's (of the race *dauricus*) and my notes on plumage could apply to both, apart from the colour (and prominence) of the tips to the median wing-coverts. In Blyth's, these were usually white or whitish, forming, with the black bases to the same feathers, a row of dark spots and a white wing-bar (see fig. 2). In

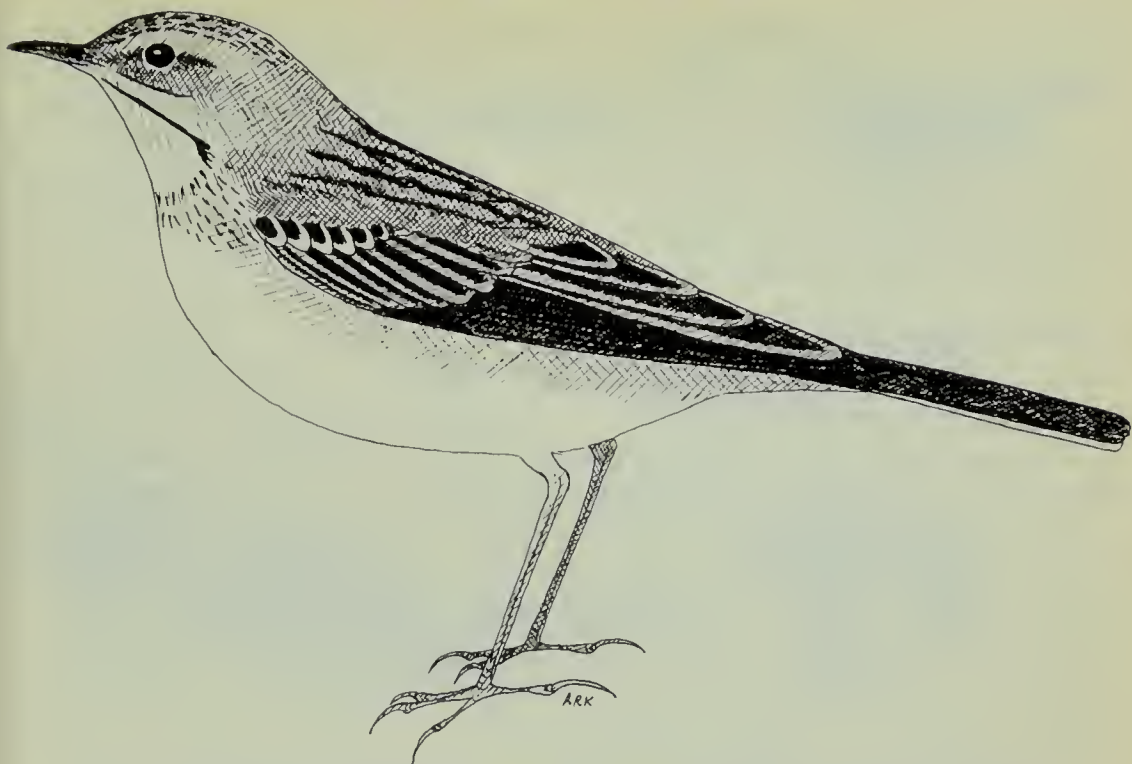


Fig. 2. Blyth's Pipit *Anthus godlewskii*, Mongolia, June 1977 (Alan R. Kitson)

Richard's, the tips to the median wing-coverts were invariably buff, and the wing-bar was correspondingly less marked. Later, examination of skins showed that, whereas the tips to the median coverts were white on 63% of Blyth's, they were similarly coloured on only 7% of Richard's (of the races *dauricus* and *richardi*). Unfortunately, there is evidence that the Richard's which show white tips are immature. Two individuals so marked have been taken in Europe and thus the tentative separation suggested here probably applies only to adults.

Thus far I have been comparing the two species as they appear in Mongolia. Drawing on my experience of 12 Richard's of the race *richardi* in autumn in Britain, I believe that Blyth's may be more easily separated from that form. It will appear as a confusing intermediate between Richard's and juvenile or immature Tawny Pipit *A. campestris*. It should look as large as the former, but be paler and tawnier in appearance, approaching the latter. Close study will, however, show richer plumage tones, including orange on the underparts (particularly on the undertail-coverts). Since a certain Blyth's in Finland in September 1975 showed clear orange-buff flanks (P. J. Grant in prep.), I sense that the elucidation of large pipit plumage characters is not far off.

Initially, in Mongolia, I found the calls of Blyth's and Richard's similar, but, after much practice, I learned to separate them. The only call that I heard from Richard's was a rasping 'shreep', which had a dry tone recalling House Sparrow *Passer domesticus* and was precisely the same to my ears as the note of autumn vagrants in Britain. From Blyth's, I heard a dry, anxious 'dzeerp' (which I suspect is uttered only by breeders) and a harsh, terminally inflected 'psheeco', somewhat recalling Yellow Wagtail *Motacilla flava* and far too coarse to cause confusion with Tawny.

This second call was often prefaced by a soft, single or double 'chup', which did recall Tawny and is, I think, never given by Richard's.

Considering the Finnish record noted above and the 19th century specimen from Sussex (Williamson 1977), the recurrence of Blyth's in Europe is probable, and most likely in autumn. Indeed, large pipits intermediate between Richard's and Tawny have sorely tried British observers in several recent autumns.

Pallas's Reed Bunting *Emberiza pallasii*

Almost the first spring migrant to reach Ulan Bator on 30th March was a small, buff-coloured bunting with a conspicuous pale rump, a pair of pale back-stripes, distinctly angled moustaches and a call that reminded me of Yellow-browed Warbler *Phylloscopus inornatus*. Its size and rust-brown cheeks suggested Little Bunting *E. pusilla*, but the call and pale rump puzzled me. On 10th April, I came upon a party of similar birds which included males and I realised that I was involved with Pallas's Reed Bunting. Throughout my stay in Mongolia, the species never became common, but I saw about 60 in all, finding migrants both in tussock grass and in the bases of clumps of willow *Salix* in the valley of the Toal River and among larch *Larix* and birch *Betula* at 2,000-3,000 m in the mountains. It also occurred in reeds *Phragmites* at Orok Nor and was breeding in tussock grass within sight of water.

Pallas's Reed is a small bunting, particularly so in comparison with Pine Bunting *E. leucocephala*. I judged it to be the same size as Little, although I was not able to compare the two species directly. Pallas's Reed showed the same tail movements as Reed Bunting *E. schoeniclus*: it frequently flicked its tail upwards, at the same time fanning it slightly and revealing the white outer feathers.

The 60 that I came across exhibited much individual variation in plumage, and the males in particular showed three types which I interpreted as 'transitional (from winter)', 'spring' and 'full breeding'.

In detail, the changing plumage of the males showed the following characters between mid April and July:

'TRANSITIONAL (FROM WINTER)' Highly variable (fig. 3 a, b), but in mid April most still showed essentially winter plumage, typified by general buff tone, with this the ground colour of the back, and with both nape-collar and rump pale fawn; head-pattern still fragmented, with dark brown cap separated by pale buff supercilium (of variable length) from dark brown or blackish cheeks, and black bib usually patchy and incomplete; wing-bars buff, breast and flanks occasionally buff. Some had yellowish nape-collars and darker heads.

'SPRING' By 10th April, most males in transitional plumage (see above), but a few much brighter, showing main features

of breeding plumage (fig. 3 c), typified by black head and usually long bib separated by white moustache, neat white nape-collar, suffused yellow or yellow-orange on nape, pale back with prominent stripes of black and grey-white (recalling zebra), unstreaked grey-white rump, pure white underparts and obvious white tips to black median and greater coverts; in this plumage, they had black bills and brownish legs.

'FULL BREEDING' Four singing birds in July all had pure white nape-collars, lacking all trace of yellow; upperparts less contrasting than in April, but with rump still remarkably pale.



Fig. 3. Pallas's Reed Buntings *Emberiza pallasii* observed in Mongolia in 1977. (a) male 10th April; (b) male 28th April; (c) male 10th April; (d, e) females 30th March (Alan R. Kitson)

Thus, while the male Pallas's Reed Bunting strongly suggests a small Reed Bunting and exhibits a basically similar plumage pattern, it does possess diagnostic characters. In spring, the white nape-collar is washed with yellow-orange and, in spring and summer, the black and pearl-grey (not black and brown) markings of the back and the conspicuously whitish rump are very obvious.

The female Pallas's Reeds (fig. 3 d, e) showed much less variation in their plumage and appeared as essentially buffy—occasionally brown—buntings with pale rumps and heavily marked moustaches. In detail, their plumage may be summarised as follows:

Forehead and crown brown (often with warm chestnut tone and darker flecks); supereilium pale buff-white, but no dark eye-stripe; cheek patch uniform brown, often with rust or mahogany tone and with or without black spot or comma-shaped mark in lower rear corner. Nape-collar fairly pale, grey-buff. Back buff or brown, overlaid with black streaks and showing pair of even paler buff stripes (on each side of back). Rump invariably pale, grey-buff or buff. Median coverts black, edged

chestnut; greater coverts and tertials black, edged buff. Malar area between cheeks and moustaches white or buff-white; moustaches black, noticeably widening towards sides of breast and then, on some, turning downwards almost to join in centre of breast. Underparts basically white, not infrequently with buff wash on sides of breast and flanks and variable sparse brown flecks on same areas. Bill horn-brown, with flesh base to lower mandible.

Thus, the female Pallas's Reed differs notably from Reed in its pale rump, heavy moustaches (not breaking out into similarly coloured streaks

on the underparts) and generally paler, buffier plumage. The pale back stripes and nape-collar also catch the eye.

Both sexes share similarly coloured tails, with white outer, black inner and dark brown central feathers, and chestnut lesser wing-coverts, the latter apparently identical to those of Reed.

I heard two calls from Pallas's Reed, both distinct from the calls of Reed and Little. The commoner utterance was a trisyllabic 'peeseooo' reminiscent of Yellow-browed Warbler, the other was a 'ch-reep' recalling both House Sparrow and Tawny Pipit.

Acknowledgements

To the acknowledgements made in the first paper in this series (*Brit. Birds* 71: 558-562), I wish to add my thanks to Tony Gaston, Steve Madge, Richard Porter and Michael Rowntree for additional notes on Green Warbler, and to Tim Inskipp for notes on certain species which he supplied when I was in Mongolia.

Summary

Field characters of Olive-backed Pipit *Anthus hodgsoni*, Blyth's Pipit *A. godlewskii* and Pallas's Reed Bunting *Emberiza pallasi* are described, based on observations made in Mongolia in spring and summer 1977. Blyth's Pipit is compared with Richard's Pipit *A. novaeseelandiae*.

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Plumage variation of known-age Herring Gulls

P. Monaghan
 and N. Duncan

**How old is a Herring Gull?
 Not necessarily as old
 as it looks!**

Large gulls do not attain adult plumage for up to five years, and the plumage characteristics of immatures are widely used as an indicator of age. While it is generally acknowledged that there is some individual variation in the rate of attaining adult plumage, the extent of such



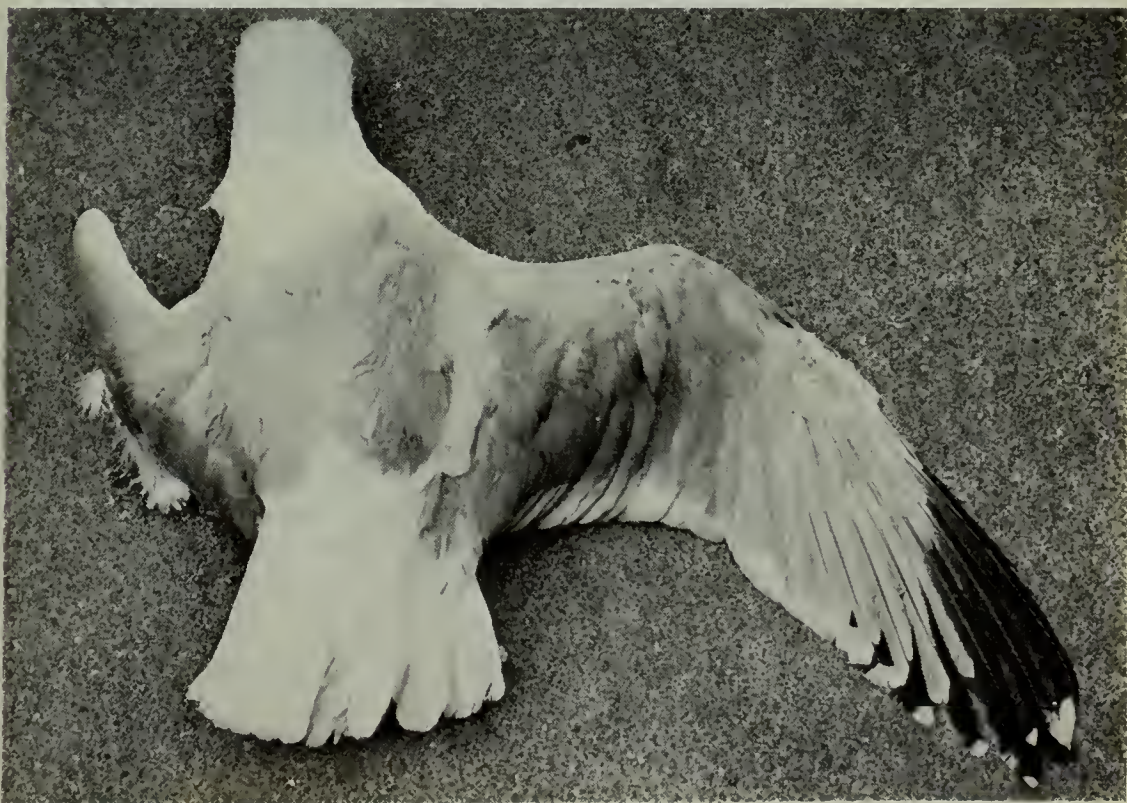
variation is rather uncertain. Poor (1946), however, from field observations of ringed American Herring Gulls *Larus argentatus smithsonianus*, concluded that '... in most cases it is impossible to determine accurately the age of a Herring Gull, either in the field or as a museum specimen, by the pattern and color of plumage and soft parts, since practically every normal combination of these characters can be assumed in two different years.' Others, notably Dwight (1920, 1925) using museum skins, have held that there is a good correlation between plumage and age, and that only a small percentage of individuals deviates from the typical pattern.

It is usually difficult to obtain samples of immatures of known age from the field for close examination. As a result of a recent cull on the Isle of May in the Firth of Forth in May 1978, however, we obtained and examined in detail the carcasses of three freshly dead, sub-adult Herring Gulls *L. argentatus argenteus* of known age and were particularly struck by the variation in their plumage characteristics. All three were ringed by one of us (ND) as nestlings on the Isle of May in 1974 and, thus, were in their fourth-summer plumage. The condition of the gonads and the presence of well-formed brood patches confirmed that they were breeding. The head, eye and bill of each were typically adult. The amount of immature plumage present on the mantle, wings and tail is described in detail below for each bird, and shown in plates 36-38.

INDIVIDUAL A (plate 36) Male with essentially full adult plumage. No trace of brown on tail, mantle or wing, other than very

faint speckling on bastard wing (which has, however, been noted by us on known-age individuals of five and six years). No trace

36. INDIVIDUAL A. Corpse of four-year-old male Herring Gull *Larus argentatus* showing some plumage characteristics of one at least five years old (see text), Fife, May 1978
(P. Monaghan & N. Duncan)

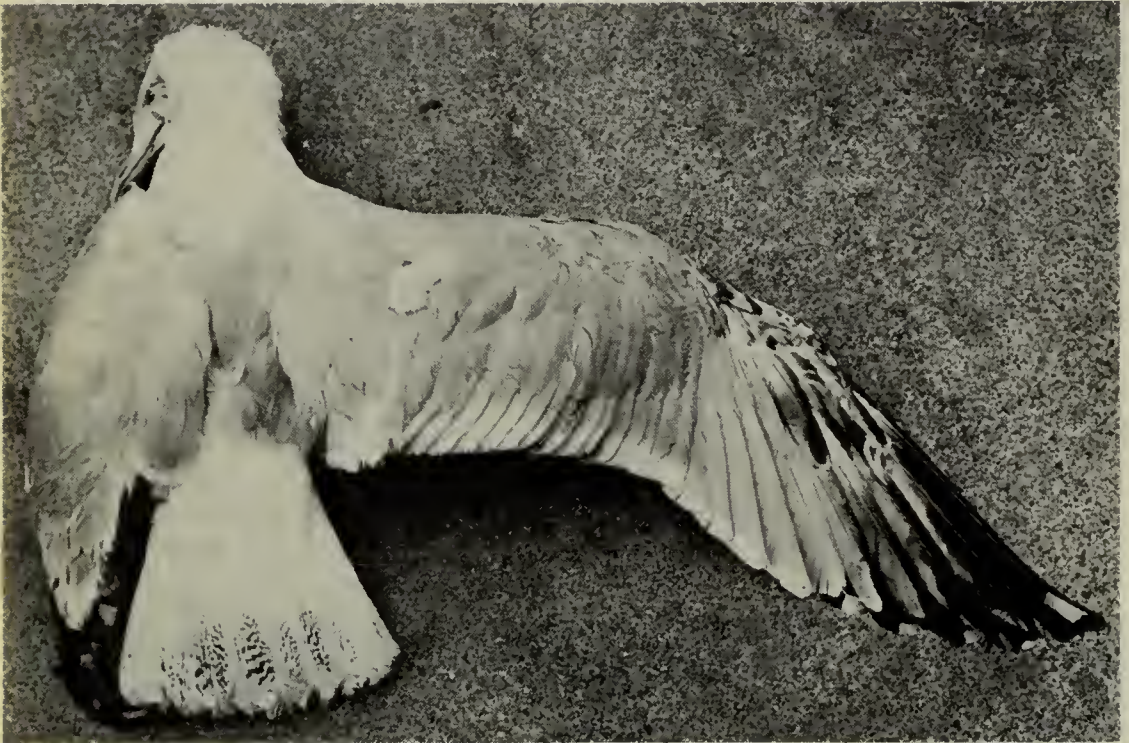


of moult.

INDIVIDUAL B (plate 37) Male. Outermost primaries blackish-brown, with some speckling, and well developed wing mirror on tenth primary only; inner primaries as adult. Bastard wing heavily speckled brown; outer primary coverts brown with buff tips, and some speckling on outermost and median greater coverts, though little on lesser coverts. Outermost secondaries speckled. Mantle essentially grey. Uppertail-coverts completely white, but all rectrices with some speckling,

heaviest on central feathers. No trace of moult.

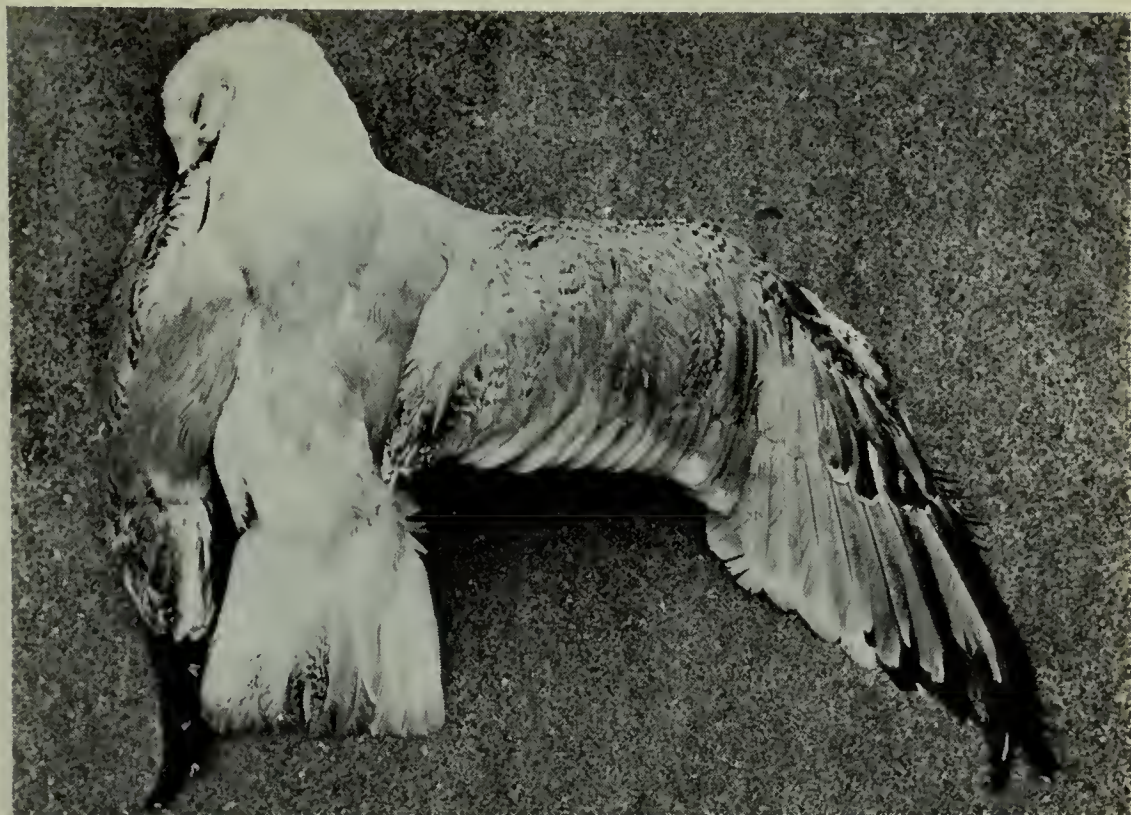
INDIVIDUAL C (plate 38) Female. Outermost primaries blackish-brown, with some speckling, and no wing mirrors. Primary coverts brown with buff tips; heavy speckling on bastard wing and all wing-coverts. Outermost secondaries lightly speckled, but tertials very heavily speckled brown. Back and scapulars grey. Uppertail-coverts white; outermost three rectrices on both sides white, and inner rectrices all speckled brown. First primary dropped.



37. INDIVIDUAL B. Corpse of four-year-old male Herring Gull *Larus argentatus* showing plumage characteristics of a four-year-old (see text), Fife, May 1978 (P. Monaghan & N. Duncan)

Based on their plumage characteristics, we would have aged individual A as not less than five years, individual B as in its fourth year, and individual C as in its third year. They were, however, all from the same colony and all in their fourth year. It is interesting to note (a) that the female was in general the least advanced in plumage development; and (b) that the development of the tail does not necessarily correlate with that of the wing: compare individuals B and C (plates 37 & 38). Poor (1946) reported that the back and wing area of Herring Gulls in their fourth nuptial plumage is typically grey, while Dwight (1920) stated that the tail of this age-class is snowy-white and the body plumage fully adult. Two of the three birds described above contradict these statements. We consider that individual B (plate 37) was most typical of fourth nuptial plumage.

While the variation in the plumage of these three birds may have been exceptional, we feel that it is necessary to consider to what extent the



38. INDIVIDUAL C. Corpse of four-year-old female Herring Gull *Larus argentatus* showing some plumage characteristics of a three-year-old (see text), Fife, May 1978 (P. Monaghan & N. Duncan)

plumage state of immature large gulls truly reflects their age. We recommend that more effort should be made to examine in detail any ringed immature gulls caught in the field or found dead, so that this problem can be assessed.

Summary

Three Herring Gulls *Larus argentatus*, known to be four years old, showed plumage characteristics typical of individuals three years old (plate 38), four years old (plate 37) and at least five years old (plate 36).

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Peregrines at a Welsh coastal eyrie

Alan Parker



An intimate view of the family life of this spectacular raptor, based on nearly 500 hours' observations of one pair

During 1973-75, I spent part of three summers guarding the eyrie of a pair of Peregrines *Falco peregrinus* on the Welsh coast, on behalf of the RSPB. In order to prevent the theft of young birds, I began my duties when they were about three weeks old, and remained until after they had all flown. This involved my presence at the site from about the end of May to the end of June, the precise dates varying from year to year. Watches were carried out throughout the day, involving extremes of 03.30 and 23.00 GMT on clear days. I was, of course, unable to watch the eyrie continuously, but many watches lasted four hours, and some eight hours. Valuable assistance was given by volunteers, but their role was to guard the birds rather than to study them. Since they did not, in the main, take notes, only my own are used here, apart from some times of first flight of the young. During the three years, I logged a total of 496 hours' watching at the site, and this account is based entirely on those observations.

The same site was used each year, and had been occupied for at least seven previous years. It was about three-quarters of the way up a near-vertical, southwest-facing, 40-m cliff. It was in a deep recess below an overhang, and was usually well sheltered from wind, rain and sun. The watch-point was about 200 m away across a small bay, slightly above the level of the eyrie and looking directly into it. This gave quite exceptional views of its occupants, and of the adults when they were on nearby ledges. Several kilometres of coastline were visible to the south, but the

view northwards was limited to the breeding cliff itself. No visits were made to the eyrie, as this would not only have been dangerous, but would also have caused considerable disturbance.

When the young were about three weeks old, they were rather inactive, remaining in the back of the eyrie and looking like a shapeless mass of white down. They were more active at feeding times, coming to the front of the eyrie, and it was then possible to count them. There were four in 1973 and 1974, and three in 1975. The adults were the same each year: a very productive pair, since British Peregrines normally rear two or three young, only very occasionally four (Brown 1976). The female was heavily built, with a strong buffish wash on her underparts; the male was small and neat, with a strikingly white breast. Each adult used a few regular resting places on the cliff, which were very rarely used by the other: each year the same set of resting places was used.

Enderson *et al.* (1972), working in Alaska, found that the female virtually ceases brooding by the time the young are three weeks old, brooding for less than 10% of the time by day 20. At my Welsh eyrie, instances of brooding were very rare, being recorded only at the start of the watching period. Additionally, the female was once seen standing in the mouth of the eyrie with her wings partly spread, apparently shielding the young from heavy rain which was blowing directly into the site. On another occasion also when they were about three weeks old, the female stood in the same way, to shelter them from hot sun. She roosted in the eyrie until the young were about 4½ weeks old, thereafter spending the night on the cliff nearby.

There was a marked difference in the hunting roles of the sexes while the young were in the eyrie. The female spent most of her time on the cliff close to the eyrie: during 67 hours of watching in 1975, while the young were in the eyrie, the female spent 89% of this time on the cliff. She often left the cliff, however, to pursue passing feral Rock Doves *Columba livia*. These were sometimes very far out to sea, and could hardly be seen with binoculars. The male would also make such opportunistic attacks, often in support of the female, but did most of his hunting in prolonged flights away from the vicinity of the eyrie. These hunting flights began very early, the earliest recorded departure being at 04.40, with five records of the male leaving before 05.00. I felt certain that he often left in very poor light, when I was unable to see him: the young could sometimes be heard calling before it was light enough for me to use binoculars. This first hunting flight is the only one for which I have a useful series of records, but other flights were noted throughout the day, the latest departure being 20.55, and the latest recorded return 21.18 with prey, and 21.30 without. The mean time of return of the male after his first flight was 06.16 (13 flights); extremes were 05.22 and 06.37, apart from a late return at 08.18 when no prey was brought in; the other 12 flights were successful. In ten of these cases, the prey was unidentifiable, but was small, perhaps a bird the size of a pipit *Anthus* or the remains of one rather larger; one was the size of a Song Thrush *Turdus philomelos* and the other a Collared Dove *Streptopelia decaocto*. The male brought in much smaller prey than did the

female, whom I only once saw catch anything other than feral Rock Doves or the occasional Collared Dove: a Blackbird *T. merula* flying over scrub near the eyrie. Possibly this was an individual characteristic, since the male at this eyrie was rather small and may have found Rock Doves too heavy. Treleaven (1977) noted that, in Devon and Cornwall, there was no size difference in prey caught by the two sexes, with a possible exception in the first week after the young hatched.

Prey was usually given to the female by putting it in front of her on the cliff. Aerial food-passes were very rare, although two were seen at the start of the watching period, and one of these involved the female taking prey from the male's talons with her bill; two more-conventional foot-to-foot passes were seen shortly before the young flew. Treleaven found that such food-passes were uncommon after the first two weeks of brooding. When the male attempted to enter the eyrie and feed the young, he was almost always driven off by the female, leaving the prey behind. I saw the male alone feed the young only three times, and on another occasion he fed them for seven minutes after the female had fed them for 33 minutes, accompanied by continuous calling from the female. The prey brought in by the male was usually already plucked, making identification impossible. On one occasion, an unplucked, clearly recognisable Collared Dove was reduced to a whitish, egg-shaped object by the female in five minutes.

Due to discontinuous coverage at the eyrie, I am unable to give details of how many times a day the young were fed, although I suspect that food was brought to the brood four to eight times as a rule. I have details of 78 occasions on which food was brought to the complete brood while still in the nest (table 1). The young were nearly twice as likely to be fed in the early morning or evening as they were in the middle eight hours of the day. Feeding of the young was not recorded before 05.00, but was noted on three occasions after 21.00, the latest being 21.20. These extreme periods were, of course, well covered.

Table 1. Distribution through the day of start of feeding of young *Peregrines Falco peregrinus* by their parents at a Welsh eyrie in 1973-75

Data based on 78 feeds observed in 249 hours of observations

Period (GMT)	% of total number of feeds	% of total time watched	% of number of feeds, corrected for even coverage (i.e. 25% in each four-hour period)
05.00-09.00	27	22	31
09.00-13.00	19	26	18
13.00-17.00	13	20	16
17.00-21.00	41	31	33

Feeding by either adult on prey brought in for the young was rarely observed, occurring in only 14 (18%) of the 78 recorded feeds. The female fed herself seven times (9%) before feeding the young, and three times after feeding the young; the male fed himself three times before feeding the young, and once after feeding them. It would be expected that the male would feed at the cliff less often than the female, since he has more opportunity to feed while hunting elsewhere.

Table 2. Duration of feeds of complete brood of young Peregrines *Falco peregrinus* by their parents in a Welsh eyrie

Year	No. of young	No. of timed feeds of entire brood	DURATION (MINUTES)		
			Minimum	Maximum	Average
1973	4	21	4	57	22
1974	4	18	2	40	14
1975	3	17	5	37	16

A total of 56 of these feedings of the entire brood were timed (table 2). It should be emphasised that these figures refer to the time spent by the adults feeding the young; just before they flew, the young spent further time dealing with prey themselves. The very short times (as brief as two seconds) refer to a small item being fed to one or two young only. The time taken to pluck a Starling *Sturnus vulgaris* and feed it to the brood of four was once timed as 19 minutes.

Of the 78 items brought to the eyrie, 14 (18%) were taken from cliff 'larders' of food previously stored near the nest, and were probably partly-eaten pigeons; the remainder were fresh. The adults would also go to these larders to feed; unfortunately, all were out of sight of my viewpoint.

I have no information on the effects of prolonged bad weather on the Peregrines' ability to bring in prey, as the weather was mostly fine during the watching period. Sea mists were frequent, and at such times the eyrie and the cliffs were invisible, but occasional outbreaks of calling from the eyrie suggested that the young were being fed. Food could have been brought from the larders on the cliff—Treleaven (1977) stated that such larders are intended as a precaution against bad weather—or perhaps the male was able to hunt inland, where visibility was often normal.

Prey was held down with the foot, torn to pieces with the bill and passed directly to the bills of the young, each being fed in turn; unwanted prey remains were left in the eyrie. In the West Country, prey remains are removed until about the end of May, but thereafter are allowed to accumulate (Treleaven 1977).

Although items often could not be identified, there is little doubt that the main prey brought to the eyrie was feral Rock Doves. These were very common in the vicinity, with about 50 resident around the nearest farm buildings and similar numbers on adjacent farms. While these formed the usual source of supply, they were augmented on race days when thousands passed along the coast. Both adult Peregrines would then circle above the cliffs until a flock passed. These were attacked, usually by the heavier female, but sometimes with the assistance of the more agile male. Sometimes the male would strike the pigeon, but the female would seize it and carry it back to the eyrie. One might expect flocks of pigeons passing close to the eyrie and unaware of its occupants to be easy targets, but this was apparently not the case. Of 83 attacks on pigeons by the female in which the outcome was known, 13 (15%) were successful, and, of 30 attacks by the male, 5 (17%) were successful. Possibly, tightly packed, fast-moving flocks of pigeons were confusing at close range; in contrast, single birds

sometimes seemed to be caught quite easily, especially when well out to sea. I was quite convinced that the Peregrines were genuinely unable to catch the birds they missed, rather than failing to follow through a 'playful' attack. Also, I had no evidence that Peregrines would kill unnecessarily large numbers of pigeons when they were available on these occasions, an unfortunate accusation sometimes made by visitors to the eyrie. Occasionally, injured pigeons escaped and fell into the sea, where they were speedily eaten by Herring Gulls *Larus argentatus*, or prey was dropped during the rare food-passes and lost. Pigeons were taken only in flight; those resting in fields were not molested. Occasionally, one was harried into taking flight from the cliff and then attacked.

The normal method of making a kill used by this pair was a fast, shallow dive, rather than the famous stoop which I saw only once. Pigeons were either seized from below, the Peregrine turning upside-down at the end of its dive, or struck on the back by the falcon's talons. The latter produced a cloud of feathers, but sometimes the victim carried on flying. I was surprised to find that a bird captured by a Peregrine was not always killed or badly injured. A Starling brought in by the male and presented to the female on a ledge promptly stood up and flew away. Rather sadly, it was recaptured by the female before it had flown more than a few metres.

By the age of about four weeks, the young Peregrines had lost their white appearance, developing brown-streaked fronts and dark markings on the back, though still downy in places. Activity greatly increased, with much wandering about the eyrie and adjacent ledges. Quite suddenly, it seemed, the down was shed with the aid of much flapping, and they took on the appearance of real Peregrines for the first time, although still with very rounded wings and short tails. At this stage, when very active, but still incapable of flight, they seemed at risk of falling into the sea. Twice, I saw young slip below the nest ledge, but they managed to scramble back with the aid of their wings. During the fifth and sixth weeks, their wings and tails lengthened rapidly, the latter bearing the yellowish terminal band characteristic of immatures.

Sexing young Peregrines was quite easy if they could be seen together. Females were clearly much larger and had proportionally larger talons. At this eyrie, there was only one female each year; and she was always the last to reach the flying stage, appearing markedly less developed than her male nest-mates for at least ten days before fledging. This suggests either that young female Peregrines develop more slowly than young males, or that in each year the female chick was produced by the last-hatching egg.

Enderson *et al.* (1972), working with time-lapse photography at six Peregrine nests in Alaska, found synchrony of hatching at three eyries, one of which had four eggs; hatching of two eggs three hours apart in one eyrie; and two eggs 28 hours apart in another; while, in the sixth, four eggs hatched, at intervals after the first of ten, 60-72 and 110 hours. This suggests that it is possible for the later development of female young to be due to their having hatched from a late egg, although this would be quite a coincidence if it happened three times in a row.

The difference in appearance and behaviour between the males almost ready to fly and the still partly downy female was considerable. The males spent much of their time exercising their wings, sometimes to the extent of leaving the ground for a few centimetres, and exploring their surroundings. When prey was brought in, they would frequently ignore it; the young female then gained a larger share, as the adults did not attempt to force it on the males. Treleaven (1977) suggested that the young were too heavy for flight immediately before they left the eyrie, and had their food intake reduced by their parents. Both adults brought in prey at this stage, and would often make up to seven passes at the eyrie, singly or together, hovering in front of the young, holding prey in their lowered talons. This was presumably aimed at inducing the young to fly, as there was plenty of room in the eyrie for the adults to land (although I twice saw this done when the young were clearly too young to leave the nest, about ten days before the first one actually flew). The young responded with a great deal of noise, but seemed unwilling to leave the eyrie. Occasionally, prey was left in the eyrie for the young to deal with, but at times they seemed uncertain how to go about this. After they had picked at it ineffectually for some time, the female entered and fed them herself.

Peregrines fly after about six weeks in the eyrie (Brown 1976). I eagerly awaited the first flight, but it was easily missed. Usually, I noticed only a sudden reduction in the number of young in the eyrie, and after a long search located the missing bird on the cliff. On the one occasion when I was actually looking at a nestling as it left the eyrie, there was no indication that this was about to happen. It was standing on the edge of the eyrie looking out, then suddenly launched itself into space and flew without loss of height for about 50 m to the grassy cliff-top. Following their first flights, the young seemed reluctant to move again, unless this could be accomplished on foot. If one landed on a small ledge, it sometimes remained for several hours without being fed if there was insufficient room for an adult to land. Within a few hours of leaving the eyrie, however, to which they did not return, except to roost for the first one or two nights, they were usually making short flights and clumsy landings. The times of first flight (table 3) indicate a mid-June departure; Treleaven found that, in Devon and Cornwall, the young were on the wing by

Table 3. Dates and times of departure from a Welsh eyrie by young Peregrines
Falco peregrinus

Year	Sex	Date	Time (GMT)	Comment
1973	♂	14th June	17.00	
1973	♂	15th June	06.30	± ½ hour
1973	♂	15th June	19.50	
1973	♀	18th June	before 11.15	In thick mist
1974	♂	16th June	14.15	
1974	♂	17th June	15.20	
1974	♂	17th June	20.53	
1974	♀	19th June	08.00	± 1½ hours
1975	♂	14th June	12.00	
1975	♂	16th June	06.30	
1975	♀	20th June	11.23	

10th June. The female lagged behind the males in all three years, flying more than four days later than the preceding male in 1975. Both adults brought prey into the eyrie for the remaining young female, as well as feeding the other young on the cliff. During one eight-hour watch on the day before it flew, however, one young female was ignored by her parents, although all the males were fed once, and one of them twice.

Having left the nest, the young at first remained scattered over the cliff, close to the eyrie. They were then fed individually by either parent, but, after a few days, they grouped together and food was taken to them all. At first, this was passed from each adult's bill to the bills of the young, as if they were still in the eyrie. Later, it was left for them to tear up themselves, though for the first ten or so days after flight it was plucked by the adults. The young were slow at feeding themselves, but there was very little bickering. Not all showed interest in the prey brought to them; often, one or two appeared uninterested, while others fed next to them. Recently flown young Peregrines rested by lying prone on ledges (fig. 1), especially during hot afternoons, when there was little activity. Twice, individuals were seen lying in piles of feathers on the adults' plucking posts; no doubt these were more comfortable than rock ledges. This habit was gradually abandoned, and, after a couple of weeks, they were able to perch on fence-posts, as did the adults, who never rested in the 'undignified', prone position.

Young Peregrines together sometimes indulged in interesting billing activities; recently fledged young would land within a few metres of observers who kept still, so I was able to study this closely. One young male repeatedly broke off small pieces of ivy *Hedera helix* and passed them to another young male next to him, but these were apparently found distasteful (Parker 1975). On another occasion, a male adopted a horizontal, subservient-looking posture in front of another, twisted his head through almost 180° and pecked at the other's breast; then, both pecked at each other's bills for several minutes (fig. 2). Positions were then reversed and the second male pecked at the bill and talons of the first.

The appearance of either adult with prey was the signal for much activity by the young, who screamed loudly and usually chased it: at least one, and sometimes all the young would pursue the adult, and attempt to seize the prey with their feet. For the first ten days or so, this was resisted by the parents; the young were clumsy and would often knock prey from the adults' talons. Fortunately, the adults were able to retrieve this before it was lost in the sea. Young would also pursue adults

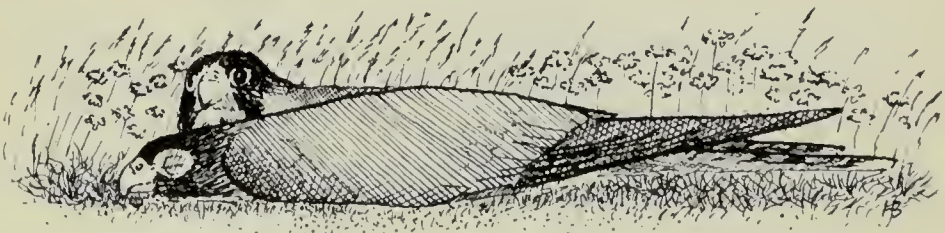


Fig. 1. Recently fledged Peregrines *Falco peregrinus* resting by lying prone on ledge near eyrie (Hilary Beck)



Fig. 2. Recently fledged male Peregrine *Falco peregrinus* in horizontal, subservient-looking position, engaged in bill-pecking with another young male (Hilary Beck)

without prey, or fly at them when they were resting on the cliff. Several attacks by adults on passing pigeons failed because the young Peregrines flew at their parent as it left the cliff in pursuit. By two weeks after fledging, the ability of the young to take prey from the adults' talons had greatly improved, and they received most of their food in the air, taking it from the adults' feet. Twice, however, I saw small items passed from the bill of an adult to the feet of one of the young. Having handed over its prey, the adult would often follow its offspring back to the cliff, presumably ready to catch the prey if it was dropped. Food-passes clearly required considerable skill, and many of the activities of the young would appear to aid the development of the co-ordination required for this and for securing prey. They spent a great deal of time in prolonged chases, screaming constantly and thrusting out their talons at each other as if making a kill. Fortunately, they never actually struck each other, apart from brief talon-grappling (fig. 3). When they pursued adults, they never attempted to strike them in this way. Often, they would capture large insects, such as bees or butterflies, by striking with their talons as if seizing much larger victims. These insects were then released, or passed from one foot to the other, but not eaten. Similarly, they would stoop on prominent vegetation, such as the topmost flowers of a foxglove *Digitalis purpurea* (fig. 4), dropping the shredded remains a few seconds later. Such activities would clearly have had great educational value, and were frequent after failed attacks on birds.

I never saw any of the young make a kill during my time at this eyrie. They seemed incapable of it in the first two or three weeks after flying, when they ventured up to 1 km from the eyrie. Attacks on passing birds were commonplace, particularly pursuits of pigeons, but always failed

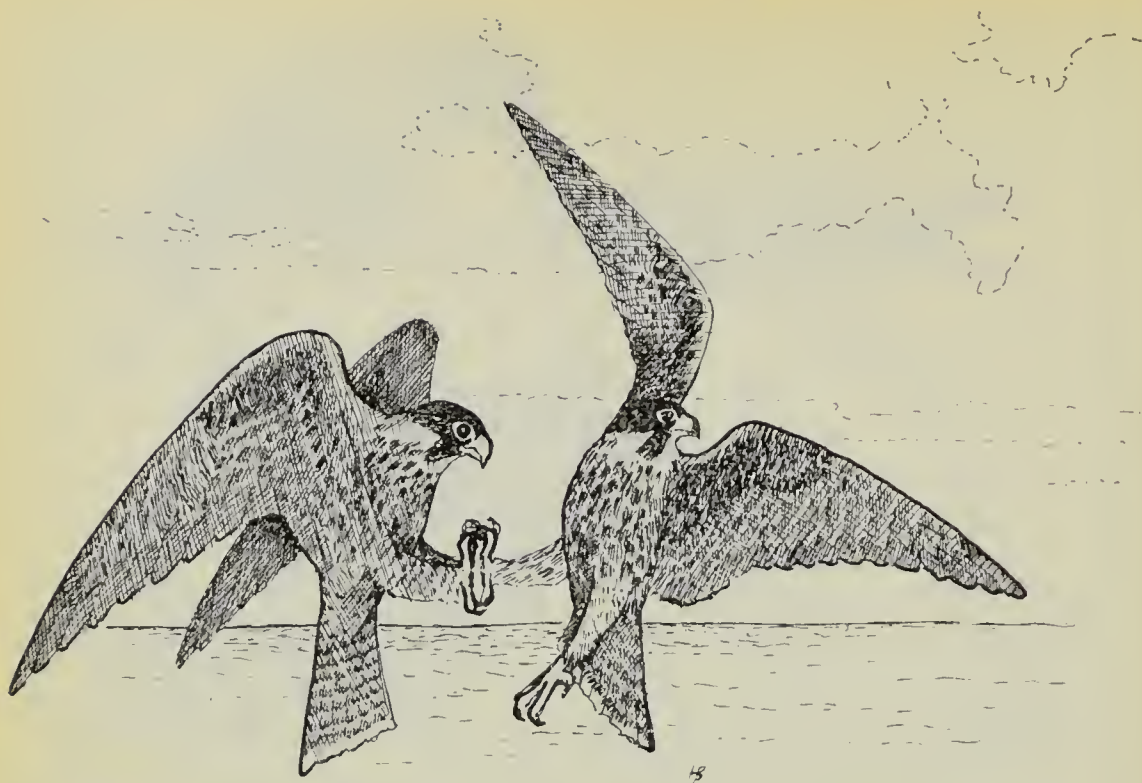


Fig. 3. Recently fledged Peregrines *Falco peregrinus* talon-grappling (Hilary Beck)

because the young were unable to keep up with their quarry. Similarly, small passerines outmanoeuvred the young Peregrines. Herring Gulls and Great Black-backed Gulls *Larus marinus* were frequently pursued, but difficult species—even such agile fliers as Chough *Pyrrhonorax pyrrhonorax*,



Fig. 4. Recently fledged Peregrine *Falco peregrinus* stooping at foxglove flowers (Hilary Beck)



Fig. 5. Adult female Peregrine *Falco peregrinus* attacking Buzzard *Buteo buteo* (Hilary Beck)

Swift *Apus apus* and Swallow *Hirundo rustica*—were also chased. One ambitious young male Peregrine even attempted to seize a Cormorant *Phalacrocorax carbo* which passed close to the eyrie. In contrast, the adults confined their attacks to prey species, or any which they seemed to consider a threat to the young. Gulls and Fulmars *Fulmarus glacialis*, which probably intended no harm to the young, were pursued and sometimes struck, but not taken. Gulls would also chase Peregrines when it was safe to do so: young birds or adults which were burdened with prey or perched. Choughs sometimes mobbed adults and were then pursued with determination, but were saved by their agility. Buzzards *Buteo buteo* were mobbed vigorously until they were well away from the eyrie. One Buzzard, unwise enough to land on the cliff immediately above the eyrie, was struck repeatedly by the female (fig. 5) until it toppled from the cliff to some rocks below, where it remained, apparently injured, for several hours. Buzzards as much as 1 km away were attacked. Foxes *Vulpes vulpes* occasionally passed along the cliff above the eyrie and were dived at furiously by the adults, though not struck. The foxes were clearly alarmed by this and made for thick cover, but dogs subjected to similar treatment ignored the falcons completely. People passing near the cliff were ignored by the Peregrines; there was a path nearby, and the birds were presumably accustomed to walkers. They did, however, react to human beings close to the eyrie, the female flying around the intruder with rapid wing beats, uttering a continuous heckling call.

A final plea

No young have been stolen from this eyrie in recent years, although there have been several attempts. The site described in this paper will probably be known to some readers, who are asked to help those responsible for guarding it—and the Peregrines—by keeping their knowledge to themselves.

Acknowledgements

I wish to thank Miss Hilary Beck for providing excellent illustrations of certain aspects of behaviour which I observed; and the landowner of the eyrie site, who unfortunately must remain anonymous to protect the Peregrines.

Summary

Many aspects of the behaviour of a pair of Peregrines *Falco peregrinus* and their young are described, based on 496 hours of observation from late May to late June in 1973, 1974 and 1975 at a Welsh coastal eyrie.

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Personalities

19 Peter J. Morgan

When I agreed to write this piece on Peter Morgan, my immediate thought was that Christian Hjort (*Brit. Birds* 71: 136) would at last be happy, for here is a subject I remember for his wild and woolly youth. On reflection, however, Peter's wild and woolly maturity has a certain degree of tameness and a partial shearing has removed at least the bulk of the wool.

Gone are the days when Peter could be found wandering in the nude around the trapping area of the Dungeness Bird Observatory; or travelling through Thornton Heath at all hours of the day and night on his journeys to and from Beddington Sewage-farm, where for several years he was one of the mainstays of the ringing programme.

Peter 'exploded' on to the ornithological scene in the late 1950s when, at the age of 15, he was awarded the Eric Hosking Prize of the Junior Bird Recorders' Club (the forerunner of the present Young Ornithologists' Club) and followed this with the JBRC medal for recording;

appointment as secretary to the youth section of the London Natural History Society; and as RSPB youth delegate to the International Youth Federation for the Study and Conservation of Nature Conferences in England, France, Belgium and Germany in the years 1959-62.

In the early 1960s, Peter turned his back on full-time education and looked towards full-time ornithology. Following visits to Dungeness, Selsey and St Agnes Bird Observatories, and expeditions to Iceland and Spain, he was appointed warden at Portland Bird Observatory at the age of 19. With this wardening went an ability to forgo sleep and consume alcohol. I well remember a Bird Observatories Conference at Oxford, when Peter, the present managing editor of this journal and I indulged in an all-night session of three-card brag. I forget who was the financial success of the night, but it was certainly not me. Peter readily admits that he was 'a bit intolerant' in those days, and I recall a prolonged argument when he insisted on claiming the word 'nubibond' on the scrabble

39. Peter J. Morgan (*Tina Fesler*)



board, a claim he maintained in the face of opposition from every resident at the Dungeness Bird Observatory at the time, the word eventually having to be forcibly removed from the board.

After leaving Portland, there was a period of drifting in Peter's life, which included hitching abroad, work as a bricklayer's labourer and a time with the Royal Automobile Club (I was planning a motoring trip to the Camargue at this time and Peter managed to acquire for me a wide array of equipment, ranging from maps to emergency triangles). In 1964, however, with the persuasion of friends from his Beddington days and encouragement from his first wife, Pat, Peter returned to full-time education and followed success with success in a spree of qualifications that astounded many of his acquaintances.

He started with advanced levels in zoology and botany and a distinction at scholarship level zoology in 1966, with later a BSc in zoology and botany and an upper second honours degree in zoology. He has, subsequently, become an Associate of the Museums Association by examination and has been elected to Membership of the Institute of Biology. During this time, his wide interest in natural history was underpinned by a formal knowledge of zoology, but, with his extrovert nature, his active interest in organisation and politics also flourished. Unknown to many bird people, he was elected the first President of the Croydon Technical College Students' Union and was the National Union of Students' Chairman at University College, Cardiff, for $2\frac{1}{2}$ years. His debating ardour was useful, but he was unsuccessful in his attempt to enter the Executive Committee of the NUS and a future in politics; he now feels grateful at the outcome.

Ornithological fieldwork continued as well, however, and, on completion of his studies, he found his niche as Keeper of Vertebrate Zoology at the City of Liverpool Museums. Peter's hard work over five years brought a good deal of order to the internationally important bird collection, so that ornithologists showed renewed interest. With his second wife, Rosemary, open house was provided for numerous visitors from Britain and abroad. The publication of the List of Type Specimens and active participation as a member of the Merseyside Ringing Group and as a Regional Representative of the BTO have enabled Peter to bridge the gap—which some years ago would have been thought unbridgeable—and become a combination of museum- and field-man.

In September 1978, Peter and his family moved to Cardiff, where he was appointed Keeper of Zoology at the National Museum of Wales. With characteristic verve, following the *Christos Bitas* oil spill, he quickly arranged for the collection of as many oiled auks as possible for museum specimens and future reference.

Despite career progress, Peter remains an enthusiast, with time for anybody sympathetic towards natural history, and lively social attitudes. This combination, at all times, enables him to work with a wide range of people. Although many of his casual acquaintances of the early 1960s may be surprised at his successful career, those of us who have known Peter for a long time feel pleasure more than surprise.

BOB SCOTT

Mystery photographs

27 Field behaviour and mannerisms are very often a great aid to identification, and this is the case with the small falcon shown in the photograph. Before considering any plumage features, the relaxed attitude of this individual as it perches on top of a slender, twiggy plant strongly suggests a Red-footed Falcon *Falco vespertinus*.



Such a perch would be out of character for the alternative small European falcons: Kestrels *F. tinnunculus* usually opt for telegraph poles and wires, trees and substantial bushes, or fence-posts; Merlins *F. columbarius* freely perch on the ground, walls and fences, and occasionally trees; Hobbies *F. subbuteo* habitually perch on trees, though sometimes they choose low ground vegetation, such as heather, and even the bare ground during migration across arid regions; while Lesser Kestrels *F. naumanni*, away from their breeding habitat of crags and buildings, favour telegraph poles and wires, fence-posts and frequently the bare ground.

The obvious plumage features of the head, alone, confirm our suspicions: pure white cheeks, the blackish stripe from the bill, tapering through the eye and fading towards the rear of the head, the short, blackish malar stripe and the thin, white supercilium. The uniformly—but lightly—streaked underparts and soft, pale fringes on all the wing-coverts and just



40. Mystery photograph
28. Name the species.
Answer next month

showing on the mantle feathers, the coincidence of the wing-tips with the tip of the tail leave us with a cast-iron identification of Red-footed Falcon. This photograph, of a juvenile or first-winter, was taken by Piet Munsterman in the Netherlands in October 1976. A fully adult male in its uniform, dark slate-grey plumage (not acquired until its second winter) presents no problems, and an adult female would have little or no streaking on the underparts.

NICK DYMOND

Notes

Mass feeding on fish by Mallards John Barber described 16 Mallards *Anas platyrhynchos* diving for small fish at Chew Valley Lake, Avon (*Brit. Birds* 70: 164). During the afternoon of 19th November 1977, at the same locality, A. H. Davis, R. J. Senior and I observed a shoal of small fish, probably fry of roach *Rutilus rutilus* or perch *Perca fluviatilis*, in shallow water in a corner of Heron's Green Bay. At least 100 Black-headed Gulls *Larus ridibundus* soon gathered, and fed on the fish by plunge-diving from heights of about 10-20 cm into water estimated to be about 10-15 cm deep. About 75 Mallards moved quickly en masse across some 100 m of open water and packed in among the gulls, forming with them a dense raft of 175 or so birds in an area of approximately 10 m \times 3 m. The Mallards fed by submerging their heads and necks and moving rapidly through the water, quickly lifting out their heads after $\frac{1}{2}$ -1 m; they did not dive, presumably because the water was too shallow. The ducks swallowed their prey below the surface; but many gulls brought fish, all of which appeared to be about 1-2 cm long, clear of the water. About 25 Tufted Ducks *Aythya fuligula* which gathered up to 5 m from the raft were probably catching fish flushed by the flock. The mass feeding lasted about ten minutes, before the Mallards and gulls began to disperse.

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Such mass feeding appears not to be uncommon and has now been adequately recorded; we shall not, therefore, be publishing further notes on the subject. Eds

Food concealment by Merlins Pitt (1927) mentioned captive Merlins *Falco columbarius* putting prey remains aside and returning to finish them the next day. Sperber & Sperber (1963) recorded food-caching by wild Merlins, and Greaves (1968) also noted the purposeful storage and concealment of whole items of food. This same behaviour has been recorded for other raptors (see, e.g., Brown & Amadon 1968, Mucller 1974). On several occasions in Galloway in 1972 and 1974, I watched Merlins concealing prey on the ground (table 1).

In 1973, on a breeding site 8 km away, Dr A. J. Watson saw an adult female hiding prey. From these observations, it seems that food concealment may occur more often than has been recorded.



Table 1. Observations on food concealment by Merlins *Falco columbarius* in Galloway, 1972 and 1974

Date	Observations
11th July 1972	One of three young, about ten days out of nest, which had been walking about for 12 minutes, dived head first into shallow furrow and emerged with small bird
5th March 1974	Male flew down and landed in clump of heather <i>Calluna/Erica</i> , fluttering through and poking head in
15th April 1974	At 10.40 GMT, male delivered prey to female, who flew down with prey uneaten in bill and disappeared into large clump of heather, emerging few seconds later without prey; she flew to land beside male. At 11.57, male returned with prey which he began eating at 12.04; at 12.12, female flew down, grabbed prey from male's talons and landed on boulder, but did not eat; at 12.24 female flew a few paces with prey in talons, deposited it in heather and returned to boulder
27th April 1974	At 06.57, female walked about until she apparently retrieved an object from edge of heather; walked with prey in talons to mossy patch and began to eat. At 07.11, she apparently retrieved another object and began eating it. At 07.39, male brought prey which he passed to female; she flew low with prey in talons, followed by male, and landed in heather; both emerged without prey.
14th May 1974	At 17.35, male brought prey to female, who flew to nearby clump of heather and reappeared few seconds later without prey. At 17.56, female flew about 100 m, landed on boulder, dropped into long heather, emerged with object in talons and flew out of sight

I also noted Merlins searching (or prowling) on the ground on several occasions; and White (1931) saw a 'tiercel now and then drop to the ground and prowl about in the heather [*Calluna/Erica*], presumably hunting for beetles or caterpillars'. Although open to a number of interpretations, prowling may be connected with food concealment, perhaps serving the purpose of finding previously hidden prey, but also of locating ground prey such as nestlings. There are several instances of Merlins taking the young of ground-nesting birds (Pitt 1923, Armitage 1932, Roberts 1962), and Meinertzhagen (1959) recorded a female Merlin hunting young Red Grouse *Lagopus lagopus* on the ground.

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Seabagh, Stoneykirk, Dumfries & Galloway

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Changes in nest-sites of Merlins in Cumbria The Merlin *Falco columbarius* has declined this century in the Sedbergh area of Cumbria, as in most other parts of Britain and Ireland. The records of Sedbergh School Ornithological Society, which contain detailed breeding notes back to 1937, show that the steepest decline was during and after the Second World War; the reason is believed to have been the destruction through increased sheep grazing of the areas of heather *Calluna/Erica* in which the Merlins bred. Out of eight areas of heather in which the species bred in 1938, only two still provided suitable habitat in the 1960s; those which disappeared were mainly small and rather marginal patches. There was also a further, less marked decline in the breeding population in the late 1950s and early 1960s (J. Parslow 1973, *Breeding Birds of Britain and Ireland*); this appears to have been stemmed and the position is now relatively stable, with one or two pairs breeding annually.

Up to 1970, Merlins breeding in the area were associated almost exclusively with heather. Of 42 nests found between 1937 and 1970, 40 were on the ground in scrapes in heather, one was in an old nest of Buzzard *Buteo buteo* in the middle of a heather slope, and the last was undocumented. Since 1970, none of the six sites found by myself and other local ornithologists has been on the ground in heather; the traditional areas have been searched, but without success. Of these six, two have been in old nests of Carrion Crows *Corvus corone* close to areas of heather, and the remainder have been at least 1 km from the nearest suitable heather; of the latter, one was again in an old crows' nest and the other three on ledges on small crags, two of which sites had been used in previous years by Buzzards and Kestrels *F. tinnunculus* respectively. Of the six sites since 1970, three are close enough together to have been used by the same pair in different years, but the other three were at least 2 km from the nearest other Merlin breeding site. Although the sites used in recent years are by no means unusual in the rest of the country, it is strange that the close tie that existed between Merlins and heather in the Sedbergh area should have been broken at a time when the traditional heather habitat has not diminished appreciably. There have been no other recent changes in habitat in the area, apart from an increase in forestry (only one of the six breeding sites since 1970 has been in the vicinity of new afforestation).

It is thus difficult to explain the trend away from heather sites, especially as traditional pressures such as gamekeeping have, if anything, decreased in the last ten years; but it is of interest that Newton *et al.* (*Brit. Birds* 71: 376-398) found Merlins nesting in trees to be much more successful than those nesting on the ground.

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Separation of adult pale-phase Arctic and Long-tailed Skuas The sight of two adult Long-tailed Skuas *Stercorarius longicaudus* off the Aberdeenshire coast in August 1978 prompts me to write on an identification feature not mentioned in the popular field guides. The adult

Long-tailed Skua has dusky undertail-coverts and lower belly, a feature which colleagues and I found to be the best way of separating Long-tailed from Arctic Skuas *S. parasiticus* in northern Norway, where mixed flocks

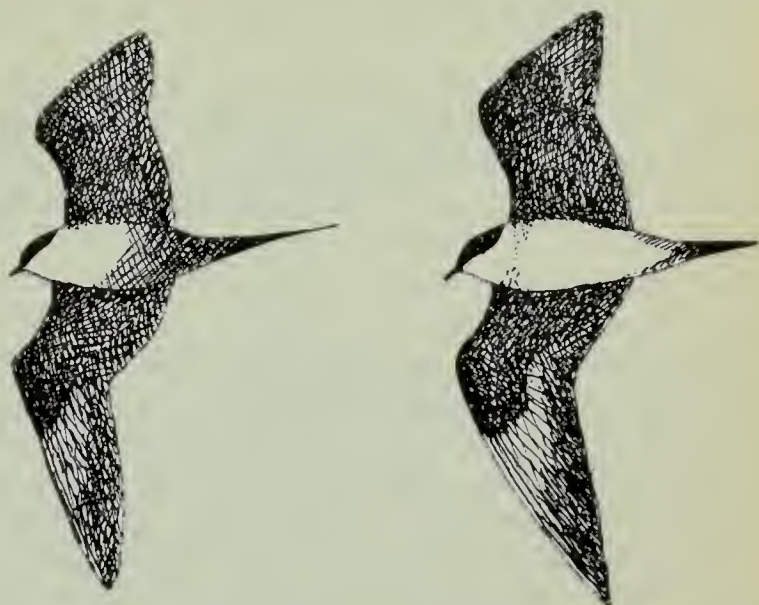


Fig. 1. Adult pale-phase Long-tailed *Stercorarius longicaudus* (left) and Arctic Skuas *S. parasiticus* (right) (A. R. Kitson)

occur. Pale-phase Arctic Skuas have the whole underparts more or less white, giving more extensive contrast with the dark underwing. My sketch (fig. 1) illustrates the point.

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Although well known to seawatchers and skua addicts, this useful difference has not previously been emphasised in print. It and other characteristics will be covered in detail in a forthcoming paper on skua identification currently being prepared by J. R. Mather. EDS

Siberian Thrush in Hampshire At 09.30 GMT on 28th December 1976, I was watching a feeding flock consisting of Blackbirds *Turdus merula*, Fieldfares *T. pilaris*, Song Thrushes *T. philomelos*, Redwings *T. iliacus* and Starlings *Sturnus vulgaris* in an uncultivated field near Alice Holt Forest Research Station in Hampshire, when I suddenly noticed that it included an unfamiliar bird. I watched it in good light through 8 × 30 binoculars at a range of 150 m for about 15 minutes and, before it flew about 5 m into a dense hedge, I realised that it was a male Siberian Thrush *Zoothera sibirica*. I noted the following:

Upperparts slate grey. Head black, with extremely prominent white supercilium extending from just in front of eye to near back of head. Bill blackish, same size and shape as that of Redwing. Legs yellowy-

white, longer than those of Redwing, about same as Blackbird. In flight, white tips to corners of tail, which was shorter than Fieldfare's. Size between Starling and Blackbird. Feeding behaviour was typically

nervous, like other thrushes, feeding quickly and suddenly jerking its head sideways as if it had sensed something. When disturbed,

flew straight to the hedge, as did the other thrushes.

I immediately went to fetch another observer, but by the time we arrived back at the field a thorough search revealed no sign of the Siberian Thrush.

This was only the second record of Siberian Thrush in Britain and Ireland; the first, also an adult male, was on the Isle of May, Fife, from 1st to at least 4th October 1954 (*Brit. Birds* 48: 21-25). P. W. KENT

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Siberian Thrush in Norfolk While birdwatching in the Kitchener Road Cemeteries, Great Yarmouth, Norfolk, at about midday on 25th December 1977, I noticed a bird resembling a Blackbird *Turdus merula* but with a very conspicuous and brilliant white stripe over its eye; it was feeding with Redwings *T. iliacus* and one Blackbird on an open patch of short grass. My first impression was that it was a freak Blackbird, but there was a very conspicuous white stripe on both sides of the head and I detected several other differences as I watched the bird at a range of 30 m from behind a tree. It was slightly smaller than the Blackbird close by, and was nearer to the size of the many Redwings which were in the vicinity. The underparts, from the legs to the undertail-coverts, were a dirty-white colour, with one or two very small blackish spots close to the black tail. The general coloration was slaty-black, with the head jet black. The very conspicuous white stripe above the eye began in front of the dark eye and ran almost to the nape, but did not join at the rear. The thrush took flight on two occasions, flying silently up into cover in the adjacent sycamores *Acer pseudoplatanus*, while the other thrushes were still feeding. In flight, the most conspicuous and obvious detail was the vivid white underwings with a blackish narrow stripe in the middle, but it was the white which caught the eye; there was also a very small amount of white on the end of its black tail: quite obvious when it alighted on a branch before disappearing into cover. The blackish bill was smaller than a Blackbird's, and the legs were palish. It fed in a typical thrush-like posture and had slightly drooped wings. I watched it for some ten minutes before it was disturbed by a man with his dog and it finally disappeared into the sycamores. After consulting reference books, there was no doubt in my mind that I had watched a male Siberian Thrush *Zoothera sibirica*, the third to be recorded in Britain and Ireland, and three days earlier than one in Hampshire the previous year (see above).

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The striking black-and-white underwing pattern of Siberian Thrush is actually rather more complex than this description implies: a broad white band (formed by white panels on the inner webs of the primaries and secondaries, and white tips to the under greater coverts) runs almost the whole length of the slate-black underwing, while there is a

narrower, shorter white band at the base of the wing (formed by white bases to the under median coverts and white tips to the under lesser coverts). The Rarities Committee regarded this discrepancy as unimportant in comparison with the other diagnostic features which were noted. EDS

Desert Warbler in Humberside At 13.15 GMT on 20th October 1975, a sandy-coloured warbler with the general form of a Whitethroat *Sylvia communis* was found feeding on the side of the Humber bank near Cliff Farm, Kilnsea, North Humberside. After watching it for about 45 minutes, the two observers, I. Corbett and M. Mills, still puzzled about its identity, went to Spurn Bird Observatory to consult reference books. Other observers, including J. M. Turton, who then went to look at the bird, were also puzzled. There was talk of its being a *Phylloscopus* warbler because of its small size and active feeding; later, D. J. Britton formed the same impression. B. R. Spence, however, suspected that it might be a Desert Warbler *S. nana*, and he was even more certain when he saw it. At 15.45 hours, he returned with a mist-net and soon the bird was in the hand. It was processed at the Observatory and its identity confirmed by reference to Williamson (1968) and Clifton (1972). It was then released where it had been caught.

The Desert Warbler favoured the sloping side of the Humber bank where it had been strengthened by stones built in the manner of a dry-stone wall, with tussocks of grass, sea aster *Aster tripolium*, scentless may-weed *Tripleurospermum maritimum* and orache *Atriplex* growing in the joints. It regularly went onto the sandy shore and the rocks scattered along the bottom of the bank. R. H. Appleby noted that, 'On the beach it made short, sharp hops, in the fashion of a Dunnock *Prunella modularis*, continually flicking and cocking its tail, reminiscent of a Dartford Warbler *S. undata*. Feeding in this way, it would simply hop out of sight into the rough cover or rocks.' DJB and MM also noted the tail-flicking when the warbler was on the ground or on low vegetation. Often, it would flit up off the beach or the rocks and tumble into the rough cover of low grass and weeds on top of the bank, or on its east side where the cover was thicker, and it occasionally perched in the taller plants (see *Brit. Birds* 69: plate 47). It also perched on a fence of pig-netting and fed in an adjoining garden, mainly under rose bushes. These moves were mainly when it was approached closely by observers: at the earliest opportunity, it would return to the side of the bank or the shore.

At first, it was fairly confiding, and sometimes very tame. When it was caught, it allowed a careful approach to within 1 m as it was ushered into the net. But, as the days passed, with large numbers of observers arriving, it became more elusive and less approachable. By 24th October, when it was last seen, it had moved about 400 m south along the Humber bank, to a small area where the side of the bank was also strengthened by a sloping dry-stone wall. There, it also fed among the tide-wrack and the rough grass at the top of the shore.

The following points were noted in the field by RHA, DJB and MM:

Upperparts sandy-brown; sandy (slightly darker than the beach), with slight grey cast, seeming rather brighter and sandier than the Dorset Desert Warbler of 1970-71; or olive grey-green. Tail rufous; pale rusty; or almost like Nightingale *Luscinia megarhynchos* (cf. Kitson 1979). Outer tail

feathers white. Underparts off-white, with warm buff on flanks. No supercilium or other marks on head. Eye lemon-yellow; pale yellow; or yellow-orange. Legs yellowish-sandy; pale flesh; or straw-coloured. Bill dark horn on upper mandible, yellowish on lower.

The following description of the bird in the hand was taken by BRS:

Forehead, crown, nape and back sandy-brown; rump and uppertail-coverts pale rufous. Primaries and secondaries pale brown, with outer webs fringed slightly darker sandy-brown and tips of secondaries very pale buff. Primary coverts and outer greater coverts dark brown, with outer webs and tips broadly fringed sandy-buff; rest of greater coverts with outer webs sandy-buff and inner webs medium-brown; lesser coverts pale sandy-brown, with slight greyish cast and dark brown shaft streak; larger feather of bastard wing dark brown, very narrowly fringed sandy-buff; smaller feather dark brown, broadly fringed sandy-buff. Outer tail feather off-white; penultimate tail feather very dark

brown, with outer web creamy and large off-white tip; next three tail feathers dark brown, with broad rufous fringes to outer webs; central tail feathers pale rufous, with dark brown shafts. All tail feathers heavily abraded. Legs and feet yellowish-buff; upper mandible dark horn, with broad yellowish-flesh cutting edge; lower mandible yellowish-flesh, with dark spot near tip; iris lemon-yellow. MEASUREMENTS Wing 58 mm; tail 49 mm; tarsus 18.5 mm; bill 11.5 mm. Weight at 15.45 GMT 8.7 g. WING FORMULA 1st 2.0 mm longer than primary coverts; 3rd and 4th equal longest; 2nd — 2.5 mm, 5th — 0.5, 6th — 2.5, 7th — 3.5, 8th — 5.0; 3rd, 4th and 5th emarginated.

Like those in Dorset in December-January 1970-71 (Clifton 1972) and in Essex in November 1975 (Harris 1977), the individual at Spurn in October 1975 was considered to be of the eastern, nominate race, which breeds in the deserts and steppes of Asia eastwards from the lower Volga and Iran, rather than the much paler, Saharan race *S. n. deserti*, which has golden-sandy-coloured upperparts and whiter underparts than *S. n. nana* (Vaurie 1959).

JOHN CUDWORTH

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Unusual Yellow-browed Warbler in Sussex The note on the Yellow-browed Warbler *Phylloscopus inornatus* apparently of the race *P. i. humei* in Northumberland on 7th November 1970 (*Brit. Birds* 71: 464-465) prompts me to place on record some observations made by myself and R. H. Charlwood in East Sussex.

On 14th November 1966, I received a telephone call from RHC to say that a strange *Phylloscopus* warbler had been found the previous day at Belle Tout, near Beachy Head; it was similar to a Yellow-browed Warbler, but appeared to have only one wing-bar and was rather dull in appearance. From about 13.30 to 14.30 GMT, RHC and I watched it feeding in the canopy of the trees, mainly against the light. On one occasion, however, it came down among the lower vegetation, almost to ground level, and provided excellent views at a range of about 15 m, sometimes in good light; we saw its features very well even though it was highly active among the remaining leaves.

GENERAL APPEARANCE Behaviour, movements and feeding habits like Goldcrest *Regulus regulus* or Firecrest *R. ignicapillus*, in fact similar to Yellow-browed Warbler or Pallas's Warbler *P. proregulus*. Size small (Goldcrest-sized), but shape and appearance of one of the smaller *Phylloscopus* warblers. Basically pale, somewhat resembling colour of Bonelli's Warbler *P. bonelli*, with no noticeable yellow or green. Prominent supercilium and single wing-bar at tip of greater coverts.

UPPERPARTS Uniform greyish-olive, no paler rump apparent. Crown and nape uniform with back. Prominent pale supercilium extending from base of bill to well behind eye, almost reaching nape, buffish or dirty-white in colour, certainly not yellow; supercilia appeared not to meet on forehead. Primaries brownish, edged and tipped prominently paler, but not striking yellow of normal Yellow-browed Warblers (prominent pale edgings suggested fresh, recently-moulted or first-winter plumage). Tips of greater coverts buffish-white (same colour as supercilium), forming very

striking wing-bar, bordered by darker (not prominent) band, presumably slightly darker subterminal area to greater coverts. On left wing, remainder of wing uniform and, in spite of excellent view, no trace of second wing-bar on tips of median coverts; similar view of right wing showed indistinct second wing-bar of similar colour to that on tips of greater coverts; this second wing-bar could be seen only under excellent viewing conditions and, even then, was not prominent. Small yellow mark from underwing at carpal joint on both wings. Tail dark brown, with paler fringes.

UNDERPARTS Buffish-white, looking rather dirty, not clean-cut and shiny. Only a trace of yellowish suffusion on breast. Breast and flanks indistinctly, finely streaked darker, which added to rather dingy appearance of underparts. Undertail paler, whiter than rest of underparts. **BARE PARTS** Legs dark, not black, probably brownish. Bill dark, base of lower mandible orangey-flesh.

CALL I did not hear call, but RHC stated that it was a loud ringing note.

After consulting Williamson (1962) and Ticehurst (1938), I considered the bird to be a Yellow-browed Warbler resembling the race *P. i. humei* on the following points: (1) late date more typical of a far-eastern *Phylloscopus* than of nominate race of Yellow-browed, which usually appears in September and early October; (2) call-note; (3) indistinct median covert wing-bar; (4) lack of yellow in supercilium and wing-bar; (5) greyish-olive (not green) upperparts and reduced yellow in fringes of primaries; (6) lack of yellow on underparts. It stayed until 17th November and was also seen by B. E. Cooper, A. Quinn and B. Metcalfe.

R. E. SCOTT

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There is a letter on the subject of *P. i. humei* on page 130.

The Rarities Committee is interested in monitoring occurrences of this race, which apparently occurs as a vagrant in western Europe. Descriptions of further claimed records should be submitted in the usual way to M. J. Rogers. We also welcome general comments on the identification problem from observers who know this race abroad. Eds

Review

Birds of Man's World. By Derek Goodwin. Cornell University Press, Ithaca & London, 1978. 183 pages; 19 black-and-white plates; several line-drawings. £5.95.

There have been a number of books concerned with the relationship between man and birds—notable in this country have been E. M. Nicholson's *Birds and Man* (1951) and, 20 years later, Dr R. K. Murton's *Man and Birds*—but these have dealt primarily with the relationship from man's point of view. Derek Goodwin's approach is different and, to my knowledge, original: the way that birds have adapted to a world dominated by man.

An introductory chapter deals with the change in the environment brought about by man as he evolved first as a sedentary agriculturist and latterly into modern industrial man, with particular reference to those birds that have adapted to these changes. This is followed by a discussion of the birds that have adapted to that ultimate human environment, the town. Next, the author considers how certain species have profited both from the unwitting provision of food through man's activities and from the deliberate feeding of birds in gardens and town squares. These chapters are separated by a discussion of bird introductions; although of interest, I found it a departure from the main theme of the book and regretted that the space had not been used for further development of the more original ideas put forward elsewhere. A final chapter speculates on the future as the environment is further developed by man.

This is not only an original book, but a delightful personal account of observations made in many parts of the world by someone who is not only fascinated and delighted by birds, but is able to convey these feelings to others. Its attraction lies in the way that it relates to so much of the reader's own experience, and it is bound to stimulate closer inspection and study of what is going on under his (or her) nose. It can be thoroughly recommended to anyone interested in birds who wants to know more about how they live; even the professional ornithologist cannot fail to find some stimulating new ideas. *Birds of Man's World* is one of the most delightful bird books I have read for some time.

D. SUMMERS-SMITH

Short reviews

Discovering Bird Courtship. By Edward A. Armstrong. (Shire Publications, Princes Risborough, 1978. 64 pages; 15 black-and-white photographs; several line-drawings. Paperback 70p.) Number 236 in the 'Discovering' series. Undoubted value for money at this price, with a plethora of examples (e.g. no fewer than nine species' displays described in

one 15-line paragraph). There is a laudable avoidance of technical ethological terms, and the text consists of simple language and short sentences; only two words not in everyday use: 'nebbling' and 'pensile'. If the book has a failing, it is that there is no central thread for the reader to follow: the novice student who starts the book may well, by the end of it, be merely

bewildered by the astonishing variety of forms taken by bird courtship. **Blackie & Co.: Blackbirds in my garden.** By **Hockley Clarke.** (Gordon & Cremonesi, London & New York, 1978. 107 pages; four black-and-white plates, several line-drawings. £5.90.) Anecdotes by the editor of *Birds and Country*, with chapter titles such as 'Founding Father' and 'The Lady of the Manor'. Type size is large, yet each page of print costs nearly 7p, more than twice the price of a page of *BWP*. **A Celebration of Birds.** By **Robert Dougall.** Illustrated by **John Barber.** (Collins & Harvill, London, 1978. 194 pages; eight colour plates; several line-drawings. £5.95.) In his preface, the author says 'Yet another book on birds? . . . In no way is it intended for people whose interest is mainly scientific, but rather for those members of the general public who may perhaps be wondering just what it is that others enjoy in birdwatching.' Fifteen species (from Robin and Blue Tit to Osprey and Avocet) are covered in 15 chapters. Lovers of William Blake, John Clare, William Cowper and William Wordsworth should be well satisfied; but the pleasures of studying birds and of watching them in their natural surroundings are hardly conveyed at all. **Your Bird Table Book.** By **Joe Firmin.** (Foulsham, London, 1978. 96 pages; 40 colour illustrations and several black-and-white illustrations. £3.95.) There is an increasing number of books on this subject: which must be good news for Britain's birds. This one is attractively produced, but expensive on a cost per word basis. Forty pages are devoted to large, colour pictures of 40 species likely to be seen in gardens, with a few lines of text. The paintings vary from excellent (e.g. Great Tit and Greenfinch) to others which are so appalling that it would be totally impossible to identify the species depicted if there was not the name printed alongside (e.g. Dunnock and Blackcap: indeed, I suspect that the Blackcap was originally a painting of a Sedge Warbler or Reed Warbler and has merely had the top of its head darkened to accord with the caption on the page). There are better books on this subject. **The Penitent Butchers.** By **Richard Fitter & Sir Peter Scott.** (Collins, London, 1978. 48 pages; ten line-drawings. £2.50.) 'The penitent butchers' were those members of 'The Society for the Preservation of the Wild Fauna of the Empire'

(the forerunner of the Fauna Preservation Society) who as 'sportsmen' were reputed to shoot the very game-animals which their Society was attempting to preserve. This short book is produced to celebrate the Society's seventy-fifth anniversary. The 48 pages describe the FPS, its history, activities, successes and future plans. **Birds in Leicestershire and Rutland.** By **Ronald Hickling.** (Leicestershire and Rutland Ornithological Society, Leicester, 1978. 202 pages; 39 photographs; 4 maps and 11 line-drawings. No price given.) This is an elegant volume: beautifully printed, well designed, and enhanced by Robert Gillmor's drawings. The habitat photographs tend to give a rather rosy picture of the county, and regrettably the reproduction is poor. The 33 pages devoted to 'The shape of the landscape' and 'Birds in the landscape' are sufficient to give a portrait of the area covered; 28 pages are used to reprint edited versions of selected articles which have appeared in L&ROS reports since 1943; and 100 pages are given over to the systematic list which is obligatory in books of this sort (this one covers records up to 1974). While $1\frac{1}{3}$ pages are devoted to the Rook, other species are dismissed in less than a line: 'The Turtle Dove is a fairly common summer migrant.' Dr C. F. Mason has contributed a list of mean, earliest and latest arrival dates for 23 summer migrants; and the atlas distribution of 96 species is shown by 10-km squares (but, for an unspecified reason, these have been adjusted to show only two grades of evidence, compared with the standard three). **Wood Engravings of Birds.** By **Christine E. Jackson.** (Witherby, London, 1978. 144 pages; 1 colour plate, 91 black-and-white illustrations. £5.95.) A useful and interesting introduction to the bird artists, from Bewick onwards, who used the medium of wood engravings for their book illustrations. The numerous engravings—well chosen, but inadequately captioned—are mostly reproduced by half tone, which gives them a soft appearance, lacking the crispness of the originals. The illustrations in Tunnicliffe's *Shorelands Summer Diary* are scraperboards, not wood engravings, yet are included with no comment. [ROBERT GILLMOR] **Collins Handguide to the Trees of Britain and Northern Europe.** Text by **Alan Mitchell**; paintings by **John Wilkinson.** (Collins, London, 1978.

96 pages; many illustrations. Paperback £1.95.) Collins and Alan Mitchell have already given us the excellent *A Field Guide to the Trees of Britain and Northern Europe* (1974). This book is smaller, less detailed, aimed at a more popular market and two-thirds of the price: it is attractively illustrated and equally reliable. **All About Canaries.** By **J. M. Neslen.** (Barrie & Jenkins, London, 1978. 128 pages; 24 colour illustrations; several black-and-white plates. £3.95.) Authoritative guide for the canary-breeder. **W. H. Hudson: writer and naturalist.** By **Dennis Shrubbsall.** (Compton Press, Tisbury, 1978. 128 pages; 8 black-and-white plates. £5.50.) Biography of the famous naturalist and writer. **Enjoying Indiana Birds.** By **Alfred (Bud) Starling.** (Indiana University Press, Bloomington & London, 1978. 308 pages; many line-drawings. £12.25.) Short profiles of some Indiana birds, arranged month-by-month, with an average of ten species in each; line-drawings by Donna McCarty are aesthetically pleasing and clearly do not aim to be identification portraits. **The Great Yew Forest: the natural history of Kingley Vale.** By **Richard William-**

son. (Macmillan, London & Basingstoke, 1978. 208 pages; 15 black-and-white plates; many black-and-white illustrations by David Kerr. £5.95.) 'The motorbike with its royal-blue petrol tank sped out of East Anglia towards the Sussex coast on a warm September morning in 1963.' So begins this very personal and most readable account of Kingley Vale National Nature Reserve as seen through the eyes of its warden. The facts are all available (including 34 pages of appendices), but the author's highly entertaining style and the book's pleasing format make this far more than just an account of a yew wood and some chalk downlands. Read it. **Collins Handguide to the Birds of Britain and Europe.** Text by **Martin Woodcock;** paintings by **Hermann Heinzel.** (Collins, London, 1978. 96 pages, many illustrations. Paperback £1.95.) In many cases, the colours are totally wrong; shapes are sometimes wrong too, so the fault does not lie entirely in the printing. The texts, however, provide short essays which should nurture the interest of budding bird-watchers who happen to buy this book. Hopefully, they will then graduate to better-illustrated guides. JTRS & SC

Letters

Field identification of Snowy Egret When discussing the problem of distinguishing the Snowy Egret *Egretta thula* from the Little Egret *E. garzetta* in the field, Stanley Cramp (*Brit. Birds* 70: 206-214) and I. J. Ferguson-Lees (in Cramp & Simmons, 1977, *The Birds of the Western Palearctic*, vol. 1) stated that the scapular plumes ('aigrettes') of the Snowy Egret are recurved whereas those of the Little Egret are straight. This, however, is not correct, since the Little Egret also has recurved aigrettes (see, for instance, *Brit. Birds* 70: plates 42-51). G. J. OREEL
Instituut voor Taxonomische Zoölogie (Zoölogisch Museum), Plantage Middenlaan 53, 1018 DC Amsterdam, Netherlands

On our behalf, Dr Jan Wattel has checked the skin collection in the Zoölogisch Museum in Amsterdam: he could find no difference between the scapular plumes of Snowy and Little Egrets. The recent confusion may be derived from R. S. Palmer (1962, *Handbook of North American Birds*, vol. 1), who stated under Snowy Egret, 'Scapular plumes . . . recurved', but under Little Egret, 'differences (from Snowy) . . . back plumes straight'. The error is, however, probably longer standing, since F. M. Chapman (1932, *Handbook of the Birds of North America*) stressed the recurved aigrettes of Snowy, yet H. F. Witherby *et al.* (1940, *The Handbook of British Birds*, vol. 3) failed to note the recurved aigrettes of Little. Dr Wattel has also pointed out that his statement in *BWP* that the rami are recurved was incorrect: it is actually the rachis.

P. J. Grant and D. I. M. Wallace have drawn attention to other, real differences: the feet and lores of Little are lime-yellow, whereas those of Snowy have a noticeably warmer tone; also, the yellow on Snowy extends up the back of the leg to the tibio-tarsal joint and occasionally even to the feathering on the thigh. EDS

Turnstone observations in Northern Ireland The statement under Turnstone *Arenaria interpres* in the 'Report on rare breeding birds in the United Kingdom in 1976' (*Brit. Birds* 71: 11-33) that the Northern Ireland Bird Records Committee 'totally rejects the Co. Down record described by Rev. P. G. Kennedy *et al.* (1954, *The Birds of Ireland*, page 157)' misrepresented its view. The Committee wishes to make clear that it accepts the observations (see below) by C. V. Stoney and H. T. Malcomson, two ornithologists held in high esteem in Ireland, but does not agree that the occurrence should be construed as a suspected breeding attempt. The undisputed facts were noted by Kennedy *et al.*: 'On another occasion Mr H. T. Malcomson and he [C. V. Stoney] saw a pair in June at some distance from the high water line on the Copeland Islands off the Co. Down coast, and in a hollow among dock plants they found a scrape which they considered could be attributed only to turnstones. A second visit disclosed no developments and the birds had gone.' PAT VIZARD

*Hon. Secretary, Northern Ireland Bird Records Committee, 9 Dillons Avenue,
Whiteabbey, Newtownabbey, Co. Antrim*

Song of Tawny Owl Further to the recent 'tu whit, tu who' correspondence (*Brit. Birds* 70: 348): on 19th and 20th November 1978, the Tawny Owl *Strix aluco* outside my bedroom window called 'ke-wick, hooooo' two or three times in succession. Perhaps it had been reading Shakespeare?

R. S. R. FITTER

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Lt-Col. A. M. Macfarlane (70: 348) suggested that 'the long, quavering hoot and the "ke-wick" call . . . are rarely, if ever, heard together'. Mr Fitter's letter shows that the combination does occur, but not whether the sounds are produced by a single owl or by the antiphonal singing (closely synchronised duetting) of two. EDS

Blackcaps in Ireland In his paper on 'Recent increases of Blackcaps at bird observatories' (*Brit. Birds* 71: 345-354), Dr Derek R. Langslow interpreted *The Atlas* as showing that 'In Britain they are common in England and Wales, but uncommon in Scotland and Ireland (Sharrock 1976)'. I believe this to be misleading. The Blackcap *Sylvia atricapilla* may be local and in many 10-km squares the density is low, but this is not the case throughout Ireland. In Co. Wicklow, for example, it is extremely common, almost every wood or suitable habitat holding a number of pairs.

R. F. RUTLEDGE

Doon, Newcastle, Co. Wicklow, Ireland

The words 'common' and 'uncommon' can be interpreted in various ways. In *The Atlas*, Dr J. T. R. Sharrock estimated that in 1968-72 there was 'an average of about 100 pairs per occupied 10-km square, and a total population in Britain and Ireland of at least 200,000 pairs', but that 'only a handful of 10-km squares in Ireland hold more than 20 pairs and the total Irish population may not exceed 1,500 pairs'. Neither Dr Langslow nor Major Rutledge disputes these statements and estimates. EDS

Unusual Yellow-browed Warblers In his note on an unusual Yellow-browed Warbler *Phylloscopus inornatus* in Northumberland, E. R. Meek commented (*Brit. Birds* 71: 464-465) that: 'The possibility of Hume's Yellow-browed Warbler [*P. i. humei*] occurring in Britain and Ireland does not appear to have been previously considered, although its range . . . is no more distant than that of Pallas's Warbler [*P. proregulus*].' But the possibility *had* been considered.

In 1955, in this journal (*Brit. Birds* 48: 297), I wrote: 'Geographically, perhaps the most likely bird in this group [smaller leaf-warblers with wing-bars] to turn up which has not already done so, is Hume's Yellow-browed Warbler (*Ph. i. humei*) which breeds no further away than *Ph. proregulus* . . . Some watcher of the northern isles, who has heard the Greenish Warbler [*P. trochiloides*], and then one day finds a different *Phylloscopus*, small, short-tailed, grey-brown and white, with conspicuous wing-bars, uttering the same double note, might fairly conclude that he has Hume's Yellow-browed Warbler under observation.'

Thus, I tried in 1955 to alert British birdwatchers to be on the lookout for Hume's Yellow-browed Warbler. Let us hope that the next one is trapped by someone who is fully informed of its diagnostic features.

H. G. ALEXANDER

Crosslands, Kennett Square, PA 19348, USA

A further note on this race, relating to a bird showing the characters of *P. i. humei* in East Sussex in 1966, appears on pages 124-126. Eds

Bigamous Willow Warbler M. R. Lawn's record (*Brit. Birds* 71: 592-593) is not unprecedented. P. H. Trahair Hartley noted apparent polygamy of Willow Warbler *Phylloscopus trochilus* at Sutton, Surrey, in 1934 (*Brit. Birds* 28: 78): the two nests were only 11 m (12 yards) apart, and the two females were reported as being 'on friendly terms'. The young in one nest fledged approximately nine days before those in the second; in each case only one adult was noted feeding the nestlings.

MARK LYNES

5 Grange Close, Hatfield, Doncaster, South Yorkshire

Fifty years ago . . .

'THE "BRITISH BIRDS" MARKING SCHEME. PROGRESS FOR 1928. BY H. F. WITHERBY. The number of birds ringed in 1928 was most satisfactory and constituted a record, beating our previous highest total by a thousand. In 1928 . . . 24,479.' (*Brit. Birds* 22: 253, March 1929)

Announcements

RSPB Members' Weekend Places are still available at Warwick University during 6th-8th April. Apply at once to Conference Secretary, RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

YOC migration phone-in, 1979 Last year, the Young Ornithologists' Club organised a national phone-in during the spring migration, and detailed records were kept of all sightings reported during the period. Altogether, approximately 3,500 records were received, covering some 40 species. From this, detailed maps of the pattern of migration were constructed, most of which were then reproduced in a report on the project. Copies of this report can be obtained (40p including postage) from the YOC office at The Lodge, Sandy, Bedfordshire SG19 2DL.



The YOC intends to repeat the project this year, using regional phone-in centres for England, Ireland, Scotland and Wales. While the majority of records will doubtless come from YOC members, reports from adult birdwatchers will also be welcome, either during the course of the phone-in or at the end of the spring, when a full list of first dates in each area would be appreciated. Reports from Scotland and Ireland, where there are relatively fewer observers, will be particularly welcome. If you wish to know more about the 1979 project, please write to the YOC headquarters (address above), or telephone Sandy (0767) 80551.

Best recent black-and-white bird-photographs The closing date for submission of prints for the twentieth annual selection is 31st March. Please consult the January issue (*Brit. Birds* 72: 45) for details of how and where to submit entries.

Requests

Slender-billed Curlew The Slender-billed Curlew *Numenius tenuirostris* is probably one of the rarest waders in the world. On behalf of the International Waterfowl Research Bureau, A. J. Prater and Dr D. A. Scott are undertaking a compilation of all records of the species, with the aims of assessing total numbers and listing sites used during the winter and migration periods. If the data confirm the impression of extreme scarcity, the Slender-billed Curlew ought to be included in the International Council for Bird Preservation's Red Data Book.

All records of the species, including site, date and number seen, and other ecological data, such as other species present, and habitats used for feeding or roosting, will be welcomed. Please send details to A. J. Prater, BTO, Beech Grove, Tring, Hertfordshire HP23 5NR.

Curlews with yellow rumps and undertail-coverts A total of 65 Curlews *Numenius arquata* was caught and ringed by the South Manchester Ringing Group at a regular inland roost in mid Cheshire on 9th December 1978. In order to study local dispersal of this apparently integral, inland, feeding/roosting flock, their rumps and undertail-coverts were dyed yellow with picric acid. Anyone seeing birds marked in this way is asked to send full details to D. Elphick, 28 Coniston Drive, Holmes Chapel, Crewe, Cheshire CW4 7LA.

Corsica A comprehensive review of the status and distribution of the birds of Corsica is currently being prepared. The authors would appreciate receiving any unpublished records or other suitable material. Communications, which will be fully acknowledged, should be sent to J.-C. Thibault, Parc Naturel Régional de la Corse, Palais Lantivy, 20000 Ajaccio, France.

Morocco With an increasing number of ornithologists visiting Morocco in recent years, there is a need for a co-ordinating body to collate the records obtained. With this in mind, a comprehensive checklist of the birds of Morocco is being prepared by J. D. R. Vernon, D. J. Fisher and S. Housden. Unpublished records (which will also be used for summarising data on the status of birds in Morocco for *BWP*) will, of course, be fully acknowledged; they should be sent to J. D. R. Vernon, 55 Wolfridge Ride, Alveston, Bristol BS12 2PR.

'The Atlas of Breeding Birds in Turkey' The summer of 1978 saw a start to the collection of data on a grid system of half degree 'squares' of latitude and longitude. Already, one new breeding bird for Turkey has been found in the course of atlas fieldwork (Red-breasted Flycatcher *Ficedula parva*) and the known ranges of several others have been altered by up to 1,000 km. Many of the 400 squares have, however, not yet been visited. All information gathered will also be made available to the Turkish conservation organisations. Anyone who will be birdwatching in Turkey in the breeding season (March to July) and is willing to help is asked to contact Simon Albrecht, Foxhill, Sutton, Pulborough, Sussex RH20 1PN.

United Arab Emirates Information is requested for inclusion in a detailed checklist. (Notes already supplied to Mrs Effie Warr or Graham Bundy need not be repeated, since there is a complete exchange of information.) Records, which will be acknowledged, should be sent to Mark Hollingworth, Post Box 948, Abu Dhabi, United Arab Emirates.

News and comment

Peter Conder and Mike Everett

Bald Ibis on the brink Efforts to induce the critically-endangered Bald Ibis *Geronticus eremita* to adopt a new and safer nesting site at Bireçik in Turkey are showing signs of success.

A cliff at Bireçik, on the banks of the Euphrates near the Syrian border, holds the last breeding colony of the species in Eurasia, but housing development and harassment have contributed to a steady decline in breeding success.

With World Wildlife Fund assistance, the Turkish authorities have built a large aviary against a cliff 1½ km from Bireçik, in which a single adult pair and nine young captured during last year's breeding season were placed with the aim of attracting incoming migrants away from the old colony.

In the aviary, the male and female have mated and produced two chicks. The number of birds returning to breed (which

totalled 1,300 in 1953), showed further decline in 1978: only 26-28 arrived compared with 34 in 1977. There are 13 nests, each with two or three nestlings. In recent years, none of the young birds of the season has returned after migration to eastern Africa, and nobody knows what is happening to them. It is planned to capture up to ten of this year's chicks and put them in the aviary.

The Bald Ibis once bred in many parts of Europe, including the Danube area, the Alps and the Jura, but disappeared during the 17th century. Now, apart from a few hundred breeding in Morocco, Bireçik is the only nesting site. (*World Wildlife News*)

'Experiments on Living Animals: statistics 1977 Great Britain' This report, published by HMSO (£1.25), relates to experiments on living animals which are subject to the provisions of the

Cruelty to Animals Act 1876. The statistics for birds, and no doubt for other animals, are astonishing. For instance, 74,793 experiments were started on birds in 1977 'to study normal or abnormal body structure or function'; 230,133 'to select, develop or study the use, etc., of medical, dental and veterinary products and appliances'; 2,701 for 'development of transplant techniques'; and 8,015 'to select, develop or study the use, hazards or safety of various substances, etc.' (i.e. pesticides). A number of other experiments are listed, and the total of experiments started on birds in 1977 was 344,423. One animal (or bird) may be experimented on more than once, if it survives.

The Home Office press statement says: 'It is a matter of great public concern about which there is unlikely to be any disagreement that the use of living animals for scientific experiments should be limited to the minimum compatible with the pursuit of legitimate scientific ends.' Furthermore, the Home Office urges all those carrying out experiments to check whether their investigations cannot be carried out by other means, and to give thought to the possibilities of developing new alternatives to the use of living animals.

The report does not give any idea of the bodies or individuals carrying out the experiments or much evidence to allow a reader to judge whether the experiments are worthwhile in relation to any harm done to the birds.

Prosecutions Birds of prey continue to feature in some of the more spectacular prosecutions under the Protection of Birds Acts 1954-1967. David Kent, an unemployed stalker from Dores, Inverness-shire, was fined £10 for keeping five nestling Peregrines *Falco peregrinus* in a confined space. He was also fined £20 for contempt of court because he refused to name the gamekeepers who had given him the eggs and who had killed the adult falcons. The information on which the case was based was laid by the RSPB.

For stealing Peregrine eggs, John Lund of Oldham was fined £900 and ordered to pay £120 costs. This is the highest fine for offences under the Protection of Birds Acts. The eggs had been marked by the RSPB soon after laying. Lund had been trying to incubate the eggs and the RSPB continued to do so until two of them

hatched. Sadly, one died shortly after hatching, but the RAF then helped by transferring the surviving chick back to Scotland, where it was placed in an eyrie with three chicks of the same age. The RSPB reports that the falcon reared the four chicks, which were later seen flying near the eyrie.

The cost in terms of time and money of investigations into cases such as these fall heavily on a voluntary body and in England and Wales the RSPB often bears the cost of the prosecution. It is not surprising, therefore, that, once again, the RSPB has been pressing for a wildlife police force similar to those in the United States, Canada and Australia.

Falcons banned from airfields One of the biggest worries to those concerned with bird of prey protection has been the use of falcons by certain companies under contract to the American Air Force to clear airfields of birds which might be a hazard to planes. It has long been known that falcons are not nearly so effective as mechanical means for clearing airfields of gulls, Lapwings, crows and so on. The Department of the Environment has now taken a hand and forbidden the use of falcons for the purpose and the commanders of six American air bases in Britain have cancelled contracts with the falconry companies worth more than £70,000 a year.

Falcon romance sparks hope In recent years, Peregrines have been raised at Cornell University and released in the eastern USA in an effort to restore the endangered species to areas from which it was extirpated by pesticide misuse, principally DDT. But, until last autumn, there was no indication that the released birds would reproduce in the wild. Recently, however, two of the falcons were seen exhibiting prenuptial behaviour that could result in mating this spring. A successful mating would be a good indication that the old conservation technique of raising animals in captivity and releasing them in the wild has worked again.

To date, 155 Peregrines have been released in eight northeastern states. The falcons are turned loose when six to eight weeks old. It takes three to four years for male falcons to reach breeding age, and two years for females. Only three out of

every ten falcons are expected to live through their fourth year, owing to the very high mortality rates. (*Outdoor News Bulletin*)

Nature Conservancy Council 'The damage now caused to wildlife by oil pollution every year cannot be permitted to continue indefinitely', says the NCC in its fourth annual report (for the period 1st April 1977 to 31st March 1978). The year covered by the report started with the blow-out at the Ekofisk Bravo platform (on 22nd April 1977) and ended with the grounding of the tanker *Amoco Cadiz* (on 16th March 1978), but the NCC points out that the death toll of seabirds from oil from an untraced source off the northeast coast of England during February and March 1978 was probably as high as during the *Amoco Cadiz* emergency. The NCC therefore calls upon Ministers to 'address their fullest efforts to a comprehensive approach to reducing the number and size of oil spills'.

Increased support for the voluntary movement The NCC has always paid tribute to the vital role played in nature conservation by the voluntary movement and co-operated actively with many national and local societies. It has initiated discussions with voluntary bodies over ways of increasing their contribution to nature conservation by developing their work in co-operation with the NCC, without, of course, restricting their essential freedom of opinion or action. The NCC has decided to make payments of £32,000 to the Society for the Promotion of Nature Conservation and £8,000 to the Scottish Wildlife Trust for each of the next three years, and it is meeting other voluntary bodies to explore ways in which it can help them increase their effectiveness.

During the year, 99 grants were awarded, totalling £60,487. The majority were for the management of nature reserves: for example, £695 to the Wildfowl Trust for constructing scrapes and lagoons and clearing dykes at the Welney Wildfowl Refuge in the Ouse Washes, Norfolk. Other grants were for the dissemination of knowledge: for example, East Lothian District Council received £110 for an observation hide in the John Muir Country Park; and Teesmouth Bird Club received £1,772 towards employing a

tutor/warden at the Teesmouth Field Centre. Grants for research and survey included £4,583 towards employing a director to co-ordinate the programme undertaken during Underwater Conservation Year, particularly the collection of data by amateur divers.

Hungarian atlas We are very pleased to hear that the Hungarian Ornithological Society (Magyar Madártani Egyesület) is organising a breeding bird atlas during 1979-82. The organiser, and Hungarian delegate to the European Ornithological Atlas Committee, is L. Haraszthy, Magyar Madártani Egyesület, 1024 Budapest, Keleti Károly utca 48, Hungary.

Cheshire breeding birds survey We have now heard that another county has started an atlas survey based on tetrads, in addition to those recently listed in 'Local atlases' (*Brit. Birds* 72: 9-10). A survey started in Cheshire in 1978 and will continue until 1982.

Change of Cheshire recorder Dr John Raines has now retired as county recorder for Cheshire and J. P. Guest (Sundridge Cottage, Dean Row Road, Wilmslow, Cheshire) has been elected as the new recorder.

... and of Lancashire recorder K. G. Spencer has recently retired from the editorship of the *Lancashire Bird Report*; records for Merseyside and 'new' Lancashire should now be sent to the new editor, Maurice Jones, 42 Roundway Down, Fulwood, Preston, Lancashire.

Ringling and Migration Conference The ringers' annual get-together was held once more at Swanwick, Derbyshire, on 5th-7th January. The very full programme, lectures and specialist meetings overlapping and interlocking, included 16 formal speakers. It was impossible to attend everything, so choice of the highlights is bound to be personal. Phil Belman opened the conference magnificently on the Friday evening with an account of 11 months' mist-netting in Greece. His account of the ringing of 28,000 birds was illustrated with almost as many transparencies crammed into his 60-minute talk. Phil's dry humour will doubtless be sought by other conference organisers. On

the Saturday morning, Dr Ian Newton presented a typically professional summary of studies on the Sparrowhawk and other raptors. There are few speakers to match him at his best.

Where else but at a ringers' conference would there be official lectures after the Saturday dinner? A full house, however, watched rapt while David Hosking explained his methods and showed examples of high speed flash photographs of birds in flight. Double-acts are often not successful at conferences, but the Eric Meek-Brian Little-Eric Meek 'sandwich' (as it was described by Malcolm Ogilvie, the session's chairman) worked well, when they explained their catching methods and results of Goosander studies in Northumberland. A moult migration of males to Norway seems even more certain now than when they wrote their papers for *British Birds* (70: 229-237; 273-283).

Other talks ranged over topics such as viruses, oil rigs, radar, moult and constant effort ringing sites.

The major part of all these conferences is, of course, not the formal lectures, but the informal discussions which take place over cups of coffee and pints of beer until the small hours of the morning. This conference, however, will perhaps be memorable most of all as the occasion on which Bob Spencer was presented with a silver-plated pair of ringing pliers in recognition of his 25 years as head of the British Ringing Scheme. We all owe a lot to this kind, friendly man, who has not lost one ounce of boyish enthusiasm for ringing in the past quarter of a century. This was his conference.

The *British Birds* mystery photograph competition proved—as intended—to be the most difficult yet. Of 123 entrants (a record number), only one correctly identified all five photographs. Four of the five were correctly named by J. Atherton, G. R. Bennett, Hugh Brazier, Adrian Cawthorne, John Cudworth, Andrew Grieve, Mike Harris, P. V. Irving, Mike Lewis, Geoff Mawson, Eric Meek, Dave Parmenter and Dr J. E. S. Walker. The sole wholly correct set of identifications was by Nigel Clark, who was presented with the traditional bottle of champagne. (Contributed by JTRS)

Hilda Quick Some good people should live for ever, particularly when they grace

one small island beloved of many. They do not, however, and thus their eventual loss is complete and bewildering. It is difficult to imagine St Agnes without Hilda Quick, but in fact she left there on her last journey in early November 1978. To most latterday birdwatchers, she was little known; this was a pity, for, under her dark beret and inside her inevitable dun-coloured windcheater and voluminous brown corduroy trousers, there was a marvellous person full of knowledge of much more than birds and quiet but sparkling humour. To converse with Hilda Quick (with tongues ever so slightly loosened by her excellent home-made wines) was a delight, so wide was her interest in life and so charming her gaiety in all experiences. It is also no easy task, even for a Cornish lady, to be accepted as a real islander, but Hilda Quick won that accolade.

Born in Penzance in 1895, Hilda Quick soon showed musical and artistic talent and this aesthetic vein ran throughout her life. The difficult art of wood-engraving was at the centre of her creation. Birdwatchers will have enjoyed it most in her two books, *Birds of Marsh and Shore* (1948) and *Birds of the Scilly Isles* (1964), but her simple yet witty illustrations also featured in fine editions of Spenser's *Faerie Queen* and W. H. Davies's poems. With a 19th-century eye for nature, Hilda Quick responded to most wild animals and wildernesses, but she became best known as a birdwatcher in Cornwall and Scilly, being a member of the Cornwall Birdwatching and Preservation Society for 44 years, an active committed member for 40 and one of three report editors for 36. Nothing in ornithology bored her, except perhaps too many rarities, or too many rarity-hunters, and she was as happy fussing over a pair of Ringed Plovers or enjoying to the full a March Hoopoe as chalking up Britain's second Blue-checked Bee-eater, which reached St Agnes just after she had come to live in her small stone cottage at Periglis in 1951. The acquisition of her island home was her greatest stroke of good fortune and she revelled in it and her tiny but exotic-filled garden, where even the most insignificant plant was harvested to give pleasure by appearance or taste. Her energy was astonishing whether at dragging kelp from beach to compost heap or walking up central Wales in her last

summer. Flatter country, she said, was for old age!

Hilda Quick was a very individual person, with a great spirit that attracted and held both affection and respect. It is sad to think that her cottage and its attendant cove will no longer attract its spring, summer and autumn callers bent on annual contact with her. If there be a better place than Periglis, she deserves it. (Contributed by D. I. M. Wallace)

Lundy visit The Lundy Field Society's visit will, of course, be on Saturday 9th June 1979, not 1978 as stated incorrectly in January (*Brit. Birds* 72: 48).

West Midland Bird Club celebrates On 13th March, the WMBC, which now has nearly 2,000 members, celebrates its 50th anniversary with a reception and buffet supper followed by talks and entertainment. We of *BB* express our congratulations and best wishes for the future.

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

K. Allsopp and S. C. Madge

These are largely unchecked reports, not authenticated records

This report covers December, with some November records and some for the first part of January 1979; except where otherwise stated, all dates refer to December.

During the first week of December, the weather pattern was influenced mainly by an anticyclone over the Continent, with low pressure to the west, bringing cool southeasterly winds across the country. From 8th, the low pressure became dominant, with a much warmer, but very wet and windy, westerly flow developing. Temperatures began dropping on 16th, when a high pressure area covered the country, bringing colder air from the Continent, with some strong winds associated with slow moving weather fronts: the first real taste of winter. A return to milder westerly air occurred from 24th to 29th. The next day, however, Continental polar air arrived from the northeast; temperatures dropped below freezing over much of the country for the following week, and heavy snow falls occurred in many areas except central England. Most of the smaller reservoirs were iced over, with consequent disturbance of the wintering wildfowl, and even harsher conditions on the Continent induced many birds to cross the North Sea.

Wildfowl

Before the onset of the really hard weather, some unusual wildfowl records were

reported. In Ireland, 12,000 **Brent Geese** *Branta bernicla* collected at Strangford Lough (Co. Down) from 10th November to 29th November, including two of the Nearctic/Siberian race *nigricans*. Another of this subspecies occurred at Tramore (Co. Waterford) in late November. The number in this one flock equalled the estimated maximum total Irish wintering population of the past years. Greenland **White-fronted Geese** *Anser albifrons flavirostris* from the same general breeding area were also reported away from their normal grounds, with ten joining the Lancashire flock of **Pink-footed Geese** *A. brachyrhynchus* and four at East Boldon (Tyne & Wear) on 10th. During the hard weather, the numbers of **Bean Geese** *A. fabalis* in the Yare Valley (Norfolk) increased to 140, and 11 arrived near Redcar (Cleveland) on 2nd January. **Brent Geese** were reported arriving on the English northeast coast between 28th and 3rd January, flying north towards their Lindisfarne (Northumberland) wintering areas, and a flock of 38 found refuge at St John's Lake, Torpoint (Cornwall) on 7th January.

Among the duck species, the **Smew** *Mergus albellus* was the one most obviously affected by the conditions. Forty were seen at Shingle Street (Suffolk), ten on Benacre Broad (Suffolk) and five on a small ice-free portion of Eyc Brook Reservoir (Leicestershire) at the turn of the year. A few were also reported to have reached Devon and Cornwall. Earlier, two



41. First-winter Ivory Gull *Pagophila eburnea*, Co. Down, December 1978 (A. McGeehan)

were seen in Ayrshire in mid December and one at Scorton (Lancashire) on 10th, both areas infrequently visited by this beautiful duck.

Another species perhaps learning how to react to hard winters in England was the **Ruddy Duck** *Oxyura jamaicensis*, six of which arrived in Devon and Cornwall and one on the Isles of Scilly. Earlier, on the duck count on 16th, 323—the highest number ever—was achieved at Chew Valley Lake and Blagdon Reservoir (Somerset). Following last month's invasion, a **Red-crested Pochard** *Netta rufina* was seen at Covenham Reservoir (Lincolnshire) on 2nd. A further **Ring-necked Duck** *Aythya collaris* appeared at Irvine (Strathclyde) on 21st, but the only other Nearctic species reported were an **American Wigeon** *Anas americana* at Chew Valley Lake on 10th and two **Teal** *A. crecca* of the race *carolinensis*, at North Bull (Co. Dublin) and Rostherne Mere (Cheshire) in late November. A tardy **Garganey** *A. querquedula* at the last locality finally left by 7th.

Inland Mediterranean Gulls

Further reports of **Mediterranean Gulls** *Larus melanocephalus* inland have again come from Chew Valley Lake, with adults being seen at the roost on 3rd and 30th and a first-winter on 9th. Other individuals were at Wath Ings (South Yorkshire) on 24th and an immature at Carlingwark

Lock (Dumfries & Galloway) from 26th October to 26th November. The confiding **Ivory Gull** *Pagophila eburnea* at Bangor Pier (Co. Down) (*Brit. Birds* 72: 87) finally left on 1st January (plate 41). Another species associated with the frozen north, **Ross's Gull** *Rhodostethia rosea*, was reported from Whitley Bay (Tyne & Wear). Once considered an extreme rarity, this species is now recorded annually. Another annual event is the appearance of the **Iceland Gull** *Larus glaucoideus* at New Brighton (Merseyside): it returned on 29th November and is now estimated to be at least 23 years old.

Birds of prey

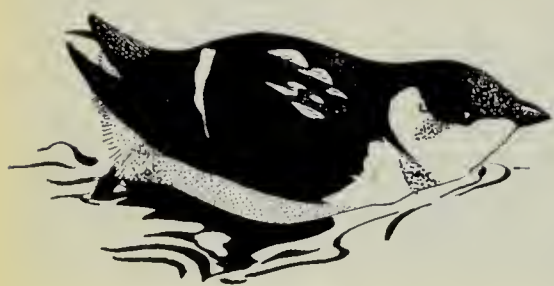
Walberswick (Suffolk) was obviously attractive to the larger raptors during the cold weather. At the start of 1979, the area was holding three **Rough-legged Buzzards** *Buteo lagopus*, two **Goshawks** *Accipiter gentilis* and 18 **Hen Harriers** *Circus cyaneus*. A total of 40 Hen Harriers was estimated to be present in Suffolk, and a further six were present on Royden Common (Norfolk) on 29th.

Two **Gyrfalcons** *Falco rusticolus* were reported, one at New Galloway (Dumfries & Galloway) on 7th January and another at Gales (Strathclyde) on 23rd. A wandering **Red Kite** *Milvus milvus* found plenty of diseased rabbits to clean up at Gosforth Park Nature Reserve (Northumberland) in late December.

Seabirds

Gale-force winds were a feature of the period associated with the frontal systems between the very cold and warm air masses; some seabirds were driven inland.

Two **Leach's Petrels** *Oceanodroma leucorhoa* were seen off the English north-east coast in late December, and there were singles at Cheddar Reservoir (Somerset) on 2nd and 14th. Fifteen **Little Auks**



Alle alle were reported from Cornwall during the period 12th to 16th, with one of them inland at Bodmin. A few were noted offshore in northeast England on 28th and, appropriately, one was found dead at South Shields Crematorium (Tyne & Wear) on 1st January. Three **Black Guillemots** *Cepphus grylle* provided an interesting record from St Ives (Cornwall) in mid December. **Grey Phalaropes** *Phalaropus fulicarius* were quite numerous in the west, with 16 at St Ives between 10th and 16th, one at Stornoway (Western Isles) on 8th and one at Barrow Gurney Reservoir (Somerset) on 30th. Thanet (Kent), not a noted sea-watching area, surprisingly reported 100 **Black-throated Divers** *Gavia arctica* and an **albatross** *Diomedea* during a northeasterly gale on 16th, followed by 51 **Great Northern Divers** *Gavia immer* and 26 **Black-throated Divers** on 17th. The last species also appeared inland at Winterset Reservoir (West Yorkshire) on 31st and at Rutland Water (Leicestershire) in early January.

Pagham Harbour (West Sussex) is a far cry from the steppes of central Asia, but the **Greater Sand Plover** *Charadrius leschenaultii* which was identified there on 9th liked it well enough to stay until at least 1st January, enabling hundreds of birdwatchers to see it, apparently with very little disturbance. The species has long been expected to make an appearance in Britain, having reached Sweden and Germany in the past, and is a noted long-

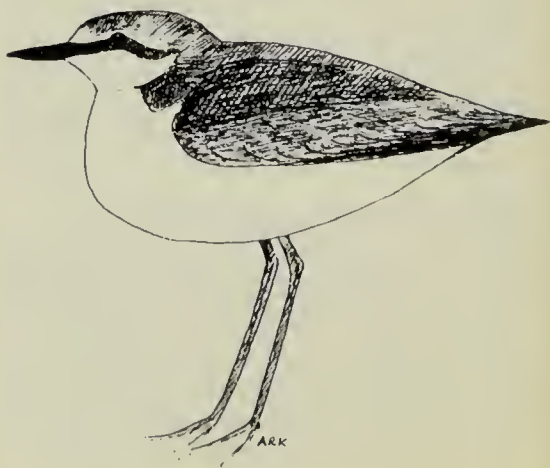
distance migrant, wintering as far south as Australia. Another Asian species, a **Demoiselle Crane** *Anthropoides virgo*, usually assumed to have escaped from captivity, spent a few hours at Burniston (North Yorkshire) on 30th November; the coincidence might suggest that the possibility of this one being a genuine vagrant should be seriously considered.

For the sixth year running, a **Kentish Plover** *Charadrius alexandrinus* arrived on Merseyside for the winter. This behaviour strongly suggests that individual birds establish their own migratory pattern. Interestingly, none of its progeny—if it is a successful breeder—has adopted the same behaviour. The only waders obviously affected by the bad weather have been **Lapwings** *Vanellus vanellus*, seen moving at the onset of the frosts, and **Woodcocks** *Scolopax rusticola*, which were found in various town parks and gardens in north-east England.

We cannot conclude this report having made no mention of a passerine species. But there were only two of note: a **Rose-coloured Starling** *Sturnus roseus* stayed at Caddington (Bedfordshire) from 12th November to 23rd November, and a **Nutcracker** *Nucifraga caryocatactes* was reported from Cumnock (Strathclyde) on 13th.

Latest news

In first half of February: lots of **Bean Geese** (e.g. 160 Yare valley and 60 Holkham, Norfolk); **Brent Goose** of race *B. b. nigricans* back in Essex; **Ring-necked Ducks** at Hayle and Marazion (both Cornwall); **Crane** *Grus grus* near Scotter (Lincolnshire); and **Belted Kingfisher** *Ceryle alcyon* in Co. Mayo, of which much more next month.



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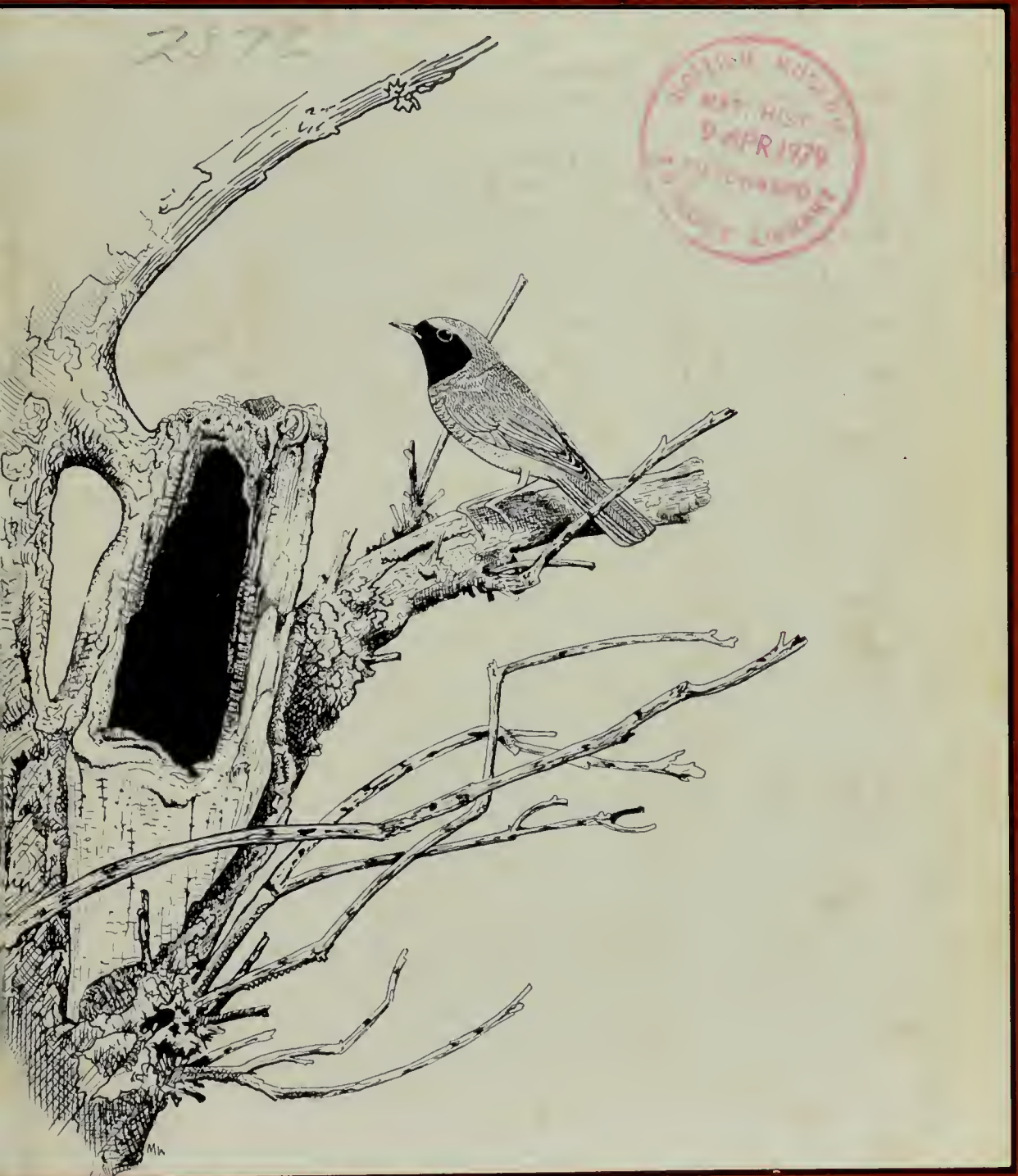
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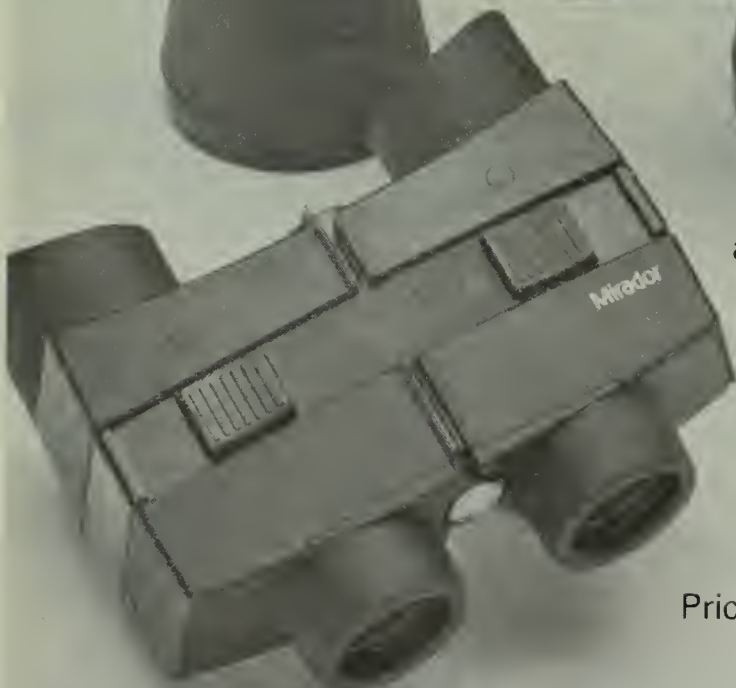
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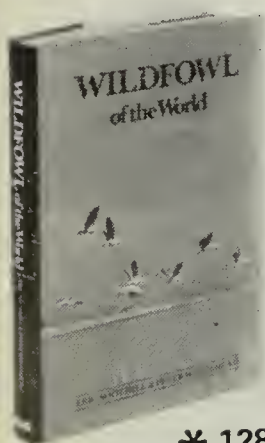
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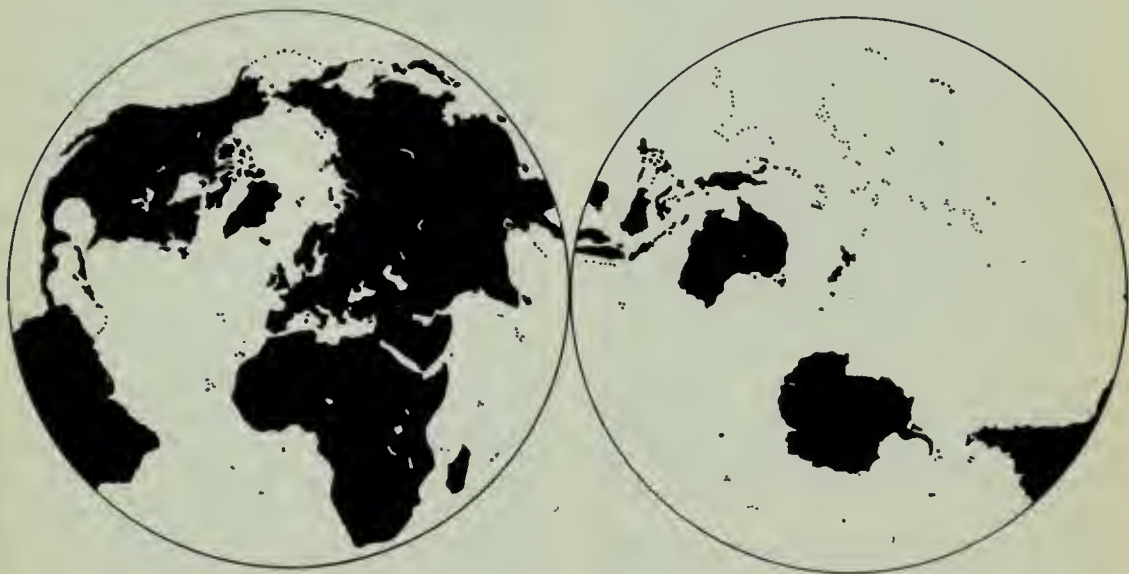
British Birds

VOLUME 72 NUMBER 4 APRIL 1979



Expeditions

Mark Beaman and Richard Porter



This new, regular feature stems from an idea by Eric Hosking. At intervals, we shall report on successfully completed expeditions and announce plans for future ones

Leaders of expeditions within the western Palearctic (and also by British and Irish groups elsewhere in the world) are invited to send us details of their plans, so that we can announce forthcoming expeditions, and of their results, so that we can summarise their achievements. We hope in this way to aid the development of ornithological investigation, by fostering the interest of potential participants and of potential sponsors, and to provide a showcase for the valuable reports which too often circulate to only a few enthusiasts.

Bustards Following the formation of an international Bustard Group under the auspices of the International Council for Bird Preservation, expeditions are being mounted to investigate the status of the endangered Canary race of the Houbara Bustard *Chlamydotis undulata fuerteventurae*

and of the Great Indian Bustard *Ardeotis nigriceps*. In addition, the Group would like to collect all unpublished data on the four western Palearctic bustards. Readers with unpublished records (especially for relatively unknown regions such as North Africa and the Middle East) are requested

to send them to Dr Nigel Collar, ICBP Bustard Group, Department of Zoology, Edward Grey Institute, South Parks Road, Oxford OX1 3PS.

Greenland 1974 The report of the University of Dundee and Wader Study Group's joint biological expedition to northeast Greenland in 1974 has just been published. The venture was a natural successor to a series of visits made since 1968, which looked at a variety of geological, hydrological and biological problems concerning the ecology of this area where man's influence has been small or non-existent. It is, indeed, one of the few areas in the world where it is possible to study a virtually natural ecosystem.

The two leaders, G. H. Green and Dr J. J. D. Greenwood, and their team must be congratulated on a first-rate piece of collective research and, further, for ensuring that the proceedings are written up in an exemplary style and format. The expedition involved a great deal of planning, with a team of 25 engaged in active fieldwork for nearly two months (June to August), in a country whose terrain is not gentle. In consequence, the chapters in the report on organisation and administration are likely to be most useful to anyone about to orchestrate similar large-scale ventures.

Most of the expedition's aims were achieved. These included the censusing of breeding waders (Ringed Plover *Charadrius hiaticula* was found to be the most abundant, forming about 56% of the wader population; next came Dunlin *Calidris alpina* (18%), Turnstone *Arenaria interpres*, Sanderling *C. alba* and Knot *C. canutus*). Ringing produced several recoveries or sightings of dyed birds, helping to show, for example, that the passage of Greenland Ringed Plovers through Britain occurs between mid August and mid September. Studies of the breeding biology and feeding ecology of various waders were undertaken, with emphasis on the Ringed Plover. We thoroughly recommend the expedition's report, available for £4.50 (Britain) or £6.00 (overseas) from Dr J. J. D. Greenwood, Department of Biological Sciences, The University, Dundee, Scotland.

Greenland 1979 The Greenland White-fronted Goose Study group hopes to visit the Disco Bay region of west Greenland in

the summer of 1979 for a four-month study of the status, breeding biology and feeding ecology of the Greenland race of the White-fronted Goose *Anser albifrons flavirostris*. The programme will be completed by an extensive ringing project, in which birds will be marked with yellow colour rings with individual codes.

Iceland Tony Fox, who is organising the Greenland goose study, informs us that a report of the ornithological work carried out as part of a more general expedition to the Thorsvaldsdalur and Myvatn areas of Iceland in 1977 is available from him at the School of Biological Sciences, University College of Wales, Aberystwyth SY23 3DA.

Martin Sharp (28 Coombe Gardens, Hughenden Valley, High Wycombe, Buckinghamshire) intends to take an expedition to the uninhabited Hornstrandir region in the summer of 1979 for the purpose of locating and censusing seabird colonies, recording patterns of attendance at colonies and carrying out a general ornithological survey. He is interested in hearing from anyone with experience of seabird censusing or with general experience of working in Iceland. Northwest Iceland is still an unexplored region from the ornithological viewpoint, witness a pair of Surf Scoters *Melanitta perspicillata* found by Martin Sharp on a fjord last summer; in view of the series of colonisations of Iceland by other Nearctic wildfowl, perhaps this species will be found breeding before long.

Indonesia Peter Holmes (see also under Kashmir) hopes to mount an expedition to the island of Sulawesi in the summer of 1979 to assess the effects of uncontrolled forest clearance by logging companies on the island's 70 or so endemic bird species. It is hoped that the expedition will be able to make a general study of the ecology of the endemic species and also investigate some taxonomic problems.

Kashmir & Ladakh Ladakh has only recently been reopened to visitors and still remains one of the least known regions of India (although one of the best known regions of geographical Tibet). Successive expeditions from the University of Southampton in the summers and autumns of 1976 and 1977 carried out surveys of the avifauna of the Indus valley near Leh, the

surrounding mountains and the Suru valley near Kargil. Attention was paid to trans-himalayan migration during both expeditions, but especially in 1977, when a total of over 940 birds of 29 species was ringed. Moderate numbers of waders were recorded on passage through the region and records included the first Marsh Sandpiper *Tringa stagnatilis*, Spotted Redshank *T. erythropus* and Black-winged Stilt *Himantopus himantopus* for Ladakh. A total of eight or nine new species for Ladakh was recorded in 1976 and about 18 more in 1977. The report of the 1976 expedition is available (£1.50 for full report, 70p for ornithological section only) from Clive Denby, c/o Department of Geography, The University, Highfield, Southampton, Hampshire, and the 1977 report will be available in due course from Charles Williams, c/o Department of Biology, also at the University of Southampton.

The Oxford Ornithological Expedition to Kashmir 1978 spent some six weeks in July-August at Hygam Rakh in the Vale of Kashmir conducting an intensive study of the breeding biology of the Little Bittern *Ixobrychus minutus*, which is remarkably abundant and tame in this area. Supplementary studies included a ringing programme at Hygam Rakh and in the Suru Valley, Ladakh, in which 836 birds of 37 species were ringed, including 90 Little Bitterns, 314 Swallows *Hirundo rustica*, 96 Citrine Wagtails *Motacilla citreola* and 173 Clamorous Reed Warblers *Acrocephalus stentoreus*. In addition to the collection of many biometric data, the moult of the Swallow and Citrine Wagtail were investigated. A report of the expedition's work is available from Peter Holmes, 100 Abingdon Road, Oxford.

Mongolia Not many people can claim to have watched birds in Mongolia, but Alan Kitson was fortunate enough to spend six months there between February and July 1977, on a British Council scholarship. He spent most of this period in the Ulan Bator area, but also managed to travel to Orok Nor in the lacustrine depression of west-central Mongolia and into the remote Hangai Mountains. Two new species were added to the national list during the six months, Crested Honey Buzzard *Pernis ptilorhynchus* and Arctic Skua *Stercorarius parasiticus*, while the scarce Relict Gull *Larus relictus* and White-naped Crane *Grus vipio* were recorded from new areas. A

number of range extensions were recorded and other highlights of the study included the discovery of a previously unrecorded colony of about 1,200 pairs of White-winged Black Terns *Chlidonias leucopterus*. Some observations have already been published, on water birds (*Wildfowl* 29: 23-30) and a series of papers on identification of some eastern Palearctic species (*Brit. Birds* 71: 558-562; 72: 5-9, 94-100).

Nepal So many of the world's pheasants are now seriously endangered in the wild that it is pleasing to hear that the World Pheasant Association is providing the majority of the funding for a two-year conservation-orientated field study in west-central Nepal in 1979-80. Tony Laidler, who is carrying out this project, plans to investigate the status, ecology and behaviour of the Himalayan Monal *Lophophorus impejanus*, Kalij Pheasant *Lophura leucomelana*, Satyr Tragopan *Tragopan satyra*, Cheer Pheasant *Catreus wallachii* and Blood Pheasant *Ithaginis cruentus*, in addition to assessing the human pressure on these species in the Pokhara region.

Norway The Hardangavidda area in southern Norway was visited last summer by the 1978 Cambridge Norwegian Expedition. Studies showed that breeding success of Dotterels *Charadrius morinellus* was low, but Purple Sandpipers *Calidris maritima* were much more successful. Purple Sandpiper chicks were found to be extremely mobile, moving up to 1 km per day. In addition, a total of 159 waders (adults and chicks) was ringed (including 25 Dotterels, 53 Purple Sandpipers and 11 Great Snipes *Gallinago media*), providing useful biometric data and, hopefully, information about migration routes. Observations were made at a Great Snipe lek, and the expedition also made a general census of the birds of the plateau.

Turkey Following the discovery of a huge migration of birds of prey around the eastern end of the Black Sea in 1976, when nearly 400,000 were recorded in northeast Turkey by a team of British ornithologists between mid August and mid October, further observations are planned for 1979 to prepare the way for very extensive work in 1980. Most of the birds recorded in the Black Sea coastal region in 1976 and later years were Honey Buzzards *Pernis apivorus*,

Black Kites *Milvus migrans* and Steppe Buzzards *Buteo buteo vulpinus*; the route taken by the western population of the Steppe Eagle *Aquila rapax orientalis* is still a mystery. Volunteers are needed for the 1979 team, which will spend three weeks in September-October searching for new migration routes through the high valleys along the Russian frontier. Would-be participants, who need have no previous experience of counting raptors, should contact Mark Beaman, Culterty Field Station, Newburgh, Grampian AB4 0AA.

West Indies The Cambridge Ornithological Expedition to the British Virgin Islands 1976 spent seven weeks carrying out what is perhaps the most extensive survey to date of the avifauna of this varied group of islands east of Puerto Rico. In addition to a general survey, which yielded several new species for the islands (Louisiana Heron *Hydranassa tricolor*, Ruddy Duck *Oxyura jamaicensis*, Knot *Calidris canutus*, Black Tern *Chlidonias niger* and Glossy Cowbird *Molothrus bonariensis*), the importance of salt ponds and mangrove swamps to migrant waders was assessed in

the light of possible threats from infilling and the development of marinas. Other aspects of the expedition's work included the identification and mapping of different habitats for birds. The expedition report is available from Tim Stowe, c/o RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

Western Isles Lying in the Minch, between Skye and Harris, the Shiant Islands are a group of islands which had not been covered by 'Operation Seafarer', so, in 1970, an expedition was launched to count the seabird colonies and carry out a ringing programme. Repeat visits were made in subsequent years and the Shiant Auk Ringing Group was formed. Expeditions with the aim of regularly monitoring a locality are rare and valuable, and we hope observers will be encouraged to join the team visiting the islands in 1979.

If you are interested in ringing seabirds, counting Razorbills *Alca torda*, Guillemots *Uria aalge*, Puffins *Fratercula arctica* and Kittiwakes *Rissa tridactyla*, and are free from 23rd June to 7th July 1979, then contact D. J. Steventon, 8 Jumar Close, Warsash, Southampton SO3 6JP.

Mark Beaman, Culterty Field Station, Newburgh, Ellon, Grampian AB4 0AA
R. F. Porter, RSPB, Scan House, 4 Church Street, Shoreham-by-Sea, West
Sussex BN4 5DQ

Field identification of west Palearctic gulls

P. J. Grant

Part 2. Common, Mediterranean, Ring-billed, Laughing and Franklin's Gulls

Part 1 of this five-part series was published last year (*Brit. Birds* 71: 145-176). The five species covered in part 2 share a similar first-year plumage pattern of blackish outer primaries and secondary bar, extensive brownish carpal-bar, more or less defined tail band, and mainly white or lightly marked underparts. Herring *Larus argentatus*, Lesser Black-backed *L. fuscus*, Great Black-backed *L. marinus*, Audouin's *L. audouinii* and Great Black-headed Gulls *L. ichthyaetus* (part 3) have some rather similar immature patterns, but at least their much greater size is obvious and there is little risk of confusion between the two groups. Adult Mediterranean



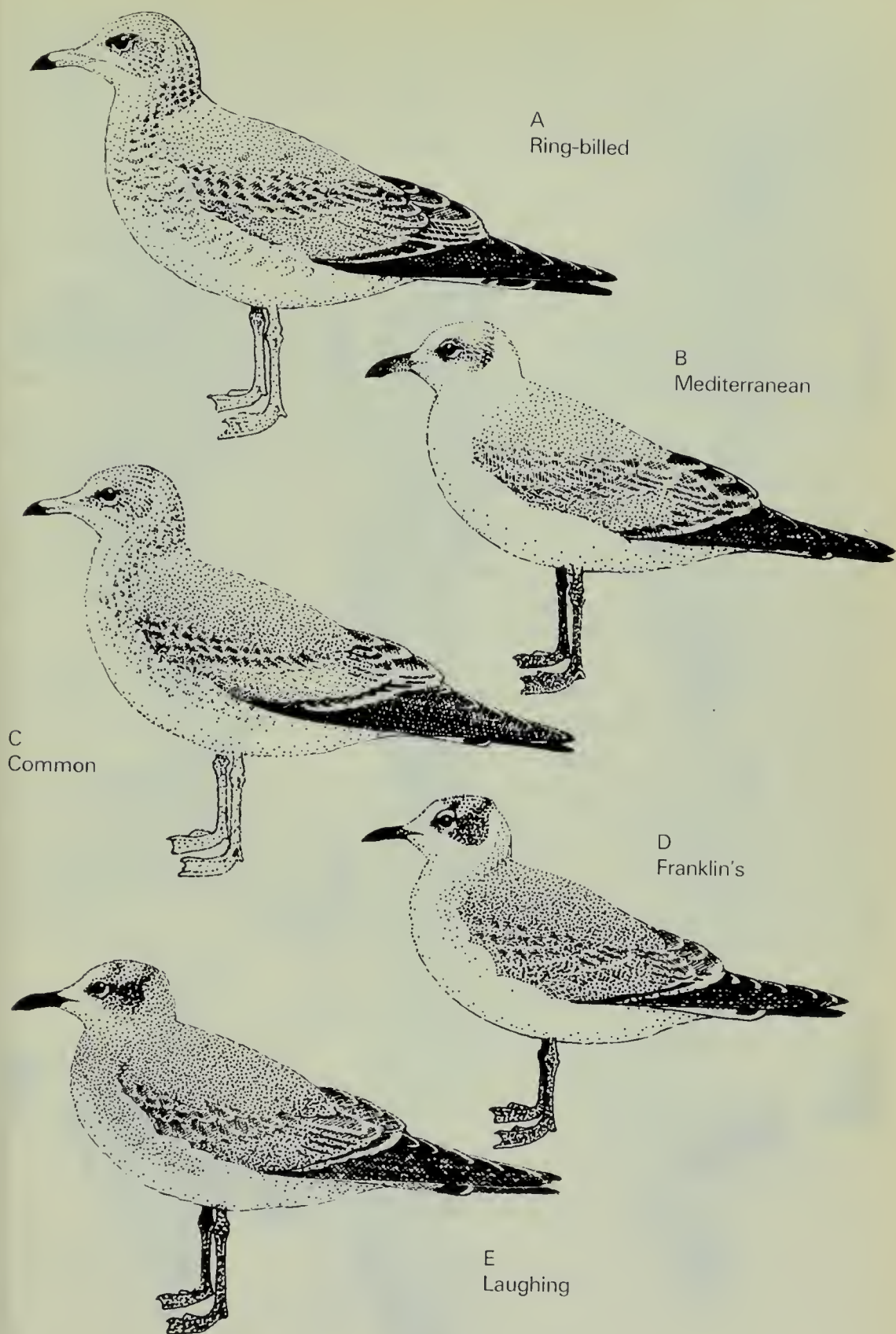


Fig. 12. First-winter Ring-billed *Larus delawarensis*, Mediterranean *L. melanocephalus*, Common *L. canus*, Franklin's *L. pipixcan* and Laughing Gulls *L. atricilla*, showing comparative sizes, shapes and stances

Table 2. Measurements in mm of five gulls *Larus* (from Dwight 1925)

	Sample size	Wing	Tail	Bill	Tarsus
Common Gull <i>L. canus</i>	16	320-385	124-148	30-38	48-58
Mediterranean Gull <i>L. melanocephalus</i>	21	282-311	113-127	31-38	47-53
Ring-billed Gull <i>L. delawarensis</i>	23	335-392	134-162	36-46	52-62
Laughing Gull <i>L. atricilla</i>	26	295-330	113-133	35-44	46-55
Franklin's Gull <i>L. pipixcan</i>	26	262-286	97-111	27-34	39-45

L. melanocephalus, Laughing *L. atricilla* and Franklin's Gulls *L. pipixcan* are hooded in summer, and Ring-billed Gull *L. delawarensis* is the only one with pale eyes.

All normally reach adult plumage in their third winter: second-years are normally readily aged, mainly by the pattern of the outer wing, and, in the cases of Ring-billed and Laughing Gulls, often also by traces of a dark secondary bar and tail band. Franklin's Gull apparently has a complete moult in both spring and autumn, unlike any other gull, and normally reaches adult plumage in its second summer, a shorter period of immaturity, which might be expected in view of its small size.

While the Common Gull *L. canus* is abundant in most of the west Palearctic (fig. 13), the Mediterranean Gull is uncommon in much of the area (fig. 15), and Ring-billed, Laughing and Franklin's Gulls are rare vagrants from America (figs. 17, 19 & 21).

Familiarity with the appearance of Common Gull at all ages will greatly aid the recognition of the others in this group, especially Mediterranean and Ring-billed Gulls which it particularly resembles in first-year plumages. In second-year and adult plumages, all five are much more distinctive, although the differences between Common and Ring-billed Gulls remain obvious only at close range.

Common Gull *Larus canus* (figs. 12C and 14, plates 42-51).



Fig. 13. World distribution of Common Gull *Larus canus*, showing approximate breeding range (solid black) and approximate southern limit of winter/non-breeding range (black line)

IDENTIFICATION

This is one of the most familiar and abundant gulls in much of the west Palearctic. It resembles adult and some immature plumages of the much larger and generally more abundant Herring Gull: at a distance (when the otherwise obvious size and bare part colour differences may be difficult to judge) it is best told by its proportionately much smaller, neater

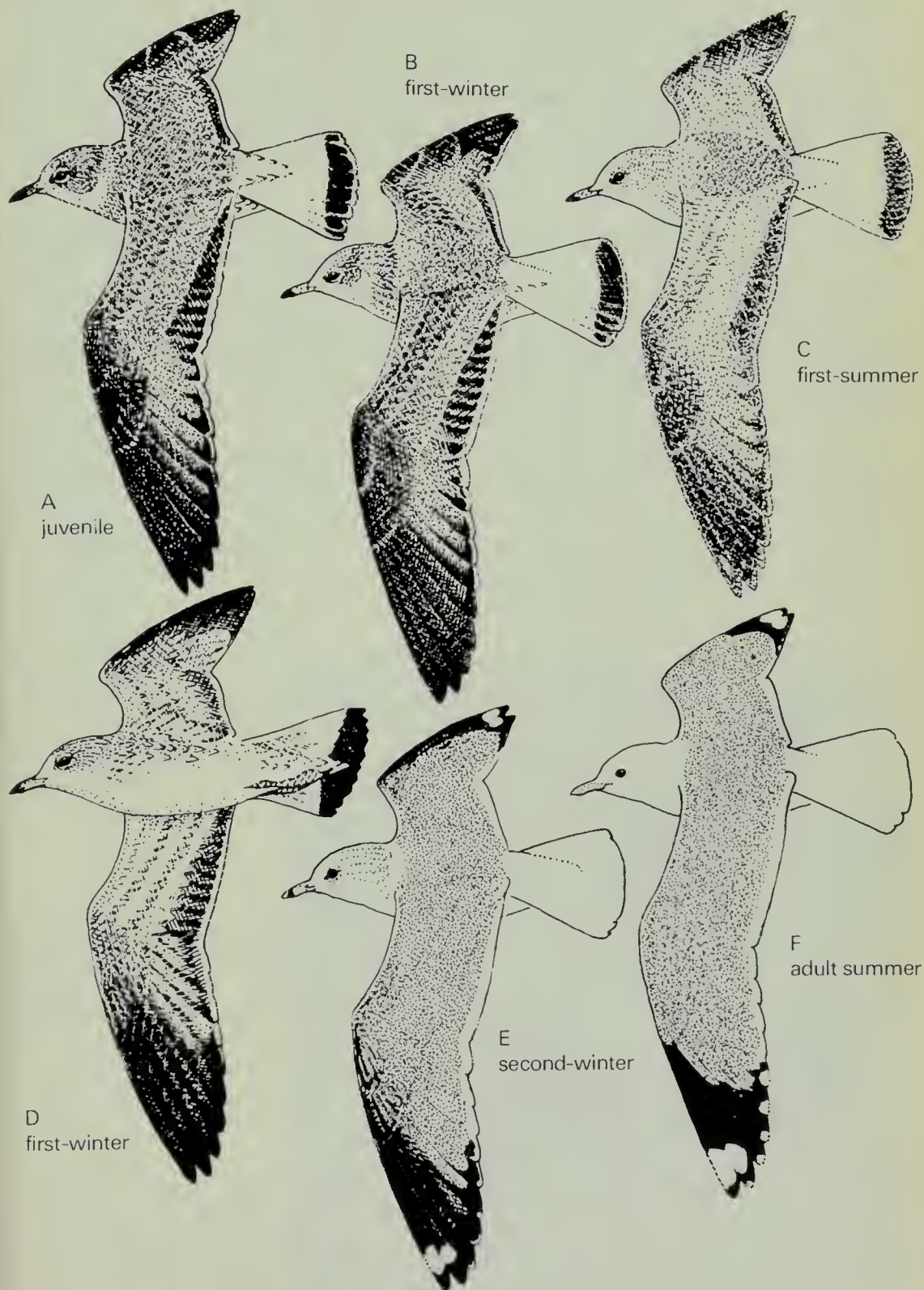
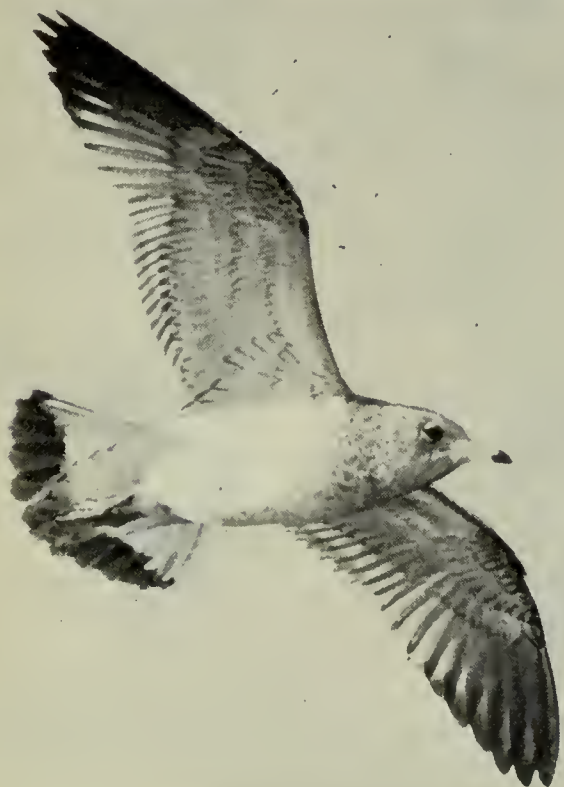


Fig. 14. Common Gulls *Larus canus* in flight

bill, thinner-winged, unlaboured flight, and more prominent mirrors in the black wing tip of the adult. At long range, it is best told from Black-headed Gull by its lack of white on the forewing at all ages, its less pointed wings and lack of a hood or dark ear-spot; at close range, the larger size, darker grey mantle and lack of reddish on the bill and legs are further differences.

On the ground it often has a characteristically elegant look, caused by the compound effect of small bill, rounded head with 'gentle' expression, rather long wings and somewhat dainty gait. The first-year flight pattern is not shared by any other *common* medium-sized gull. Second-years and adults are best identified by the medium size, rather dark blue-grey mantle and inner wing, prominent white tertial-crescent when perched, and yellowish or greyish bare part colour.

The others in this group are told from Common Gull by a combination of characters as described in the respective species accounts. It is always worth checking the obvious characters of Common Gull—size, bill shape, head pattern and mantle colour—to eliminate the possible presence of one of the others: Ring-billed is slightly larger with thicker bill and paler mantle, and perched second-years and adults lack the prominent white tertial-crescent. Mediterranean Gull is smaller, with a rather heavy, drooping bill; immatures have a clear-cut black streak behind the eye, much paler mantle, more contrasting upperwing pattern and whiter underwing. Second-year and adult Mediterranean and all ages of Laughing and Franklin's Gull have a distinctive appearance and are unlikely to be mistaken for Common Gulls.



42. First-winter Common Gull *Larus canus*, London, February 1977 (R. J. Chandler)

AGEING

Juvenile: scaly brown mantle, and extensive dusky markings on head and underparts (summer to September).

First-winter: dusky head and body markings, uniform grey mantle, blackish outer primaries, secondaries and tail band, brown carpal-bar, and black-tipped bill (July to April).

First-summer: as first-winter, but head and body whiter and wing pattern faded paler and contrasting with blue-grey mantle (March to October).

Second-winter: wings uniform grey, with black tip not confined to primaries, but extending along leading edge of the outer wing, small mirrors, white primary tips tiny or lacking, and much dusky head streaking (July to April).

Second-summer: as second-winter, but head white or lightly marked (March to October).

Adult winter/third-winter: black of wing tip confined to primaries, large mirrors, prominent white primary tips (obvious when perched), dusky head markings, and bill all pale or with thin dark subterminal band, the latter perhaps indicating third-winter rather than full adult (August to March).

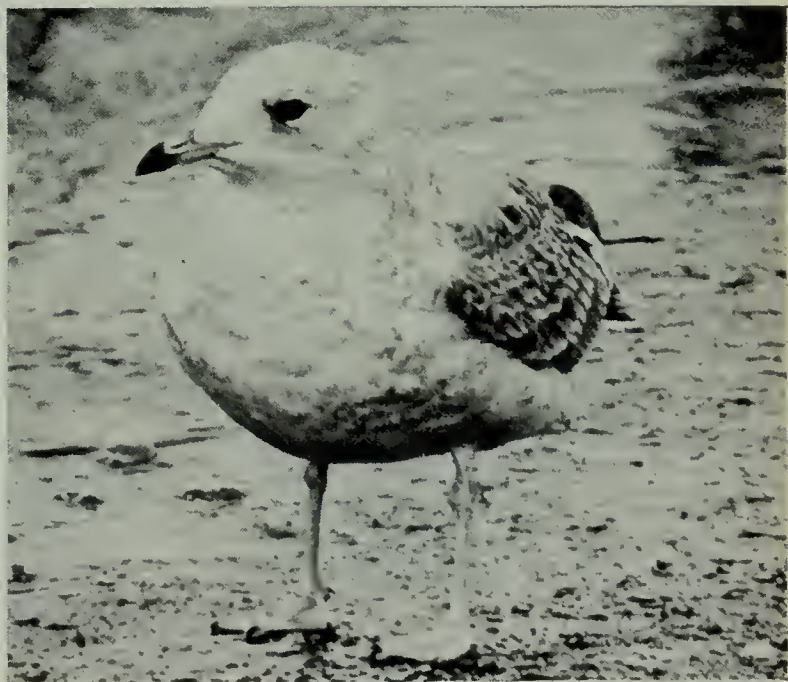
Adult summer/third-summer: as adult winter, but head white and bill yellowish-green (March to October).

DETAILED DESCRIPTIONS

Juvenile (fig. 14A. Underwing and tail similar to first-winter, 14D)

HEAD Forehead white, throat and upper nape whitish. Ear-coverts and crown densely streaked grey-brown, sometimes forming ill-defined partial hood. Thin white crescents above and below eye and dusky eye-crescent. **BODY** Lower nape, flanks and often defined broad breast

band uniform, mottled or streaked grey-brown. Belly whiter. Mantle buff, with neat pale feather fringes most prominent on lower back. Rump and undertail-coverts white, with dark arrowhead markings. **WINGS** Carpal-bar light brown, with paler feather fringes, and tertials

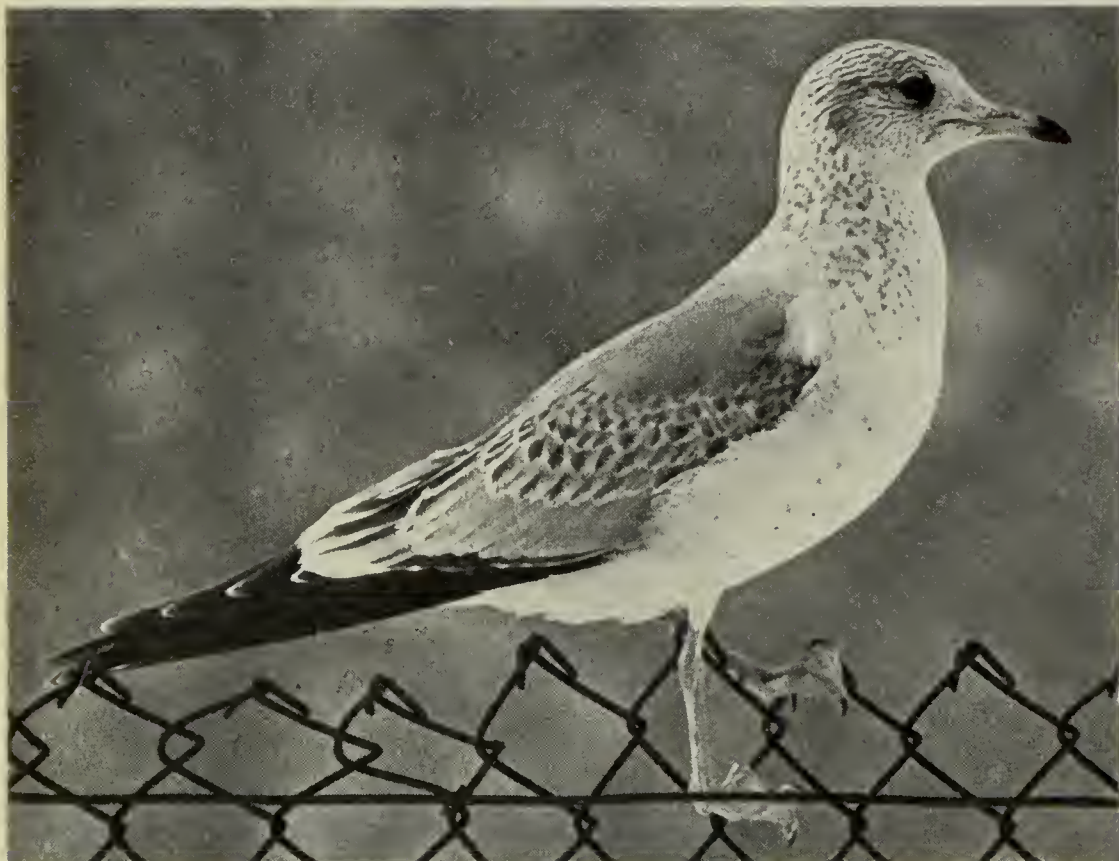


43. First-winter Common Gull *Larus canus*, London, February 1977 (R. J. Chandler)

with rather broad ill-defined whitish fringes. Greater coverts mainly dull grey-brown, forming paler panel between carpal-bar and blackish, white-tipped secondaries. Most of primary coverts and outer three to five primaries wholly blackish-brown: dull grey on outer webs and terminal whitish fringes increasing in extent (and subterminal blackish areas decreasing) from 5th or 6th inwards,

forming pale division between primaries and secondaries. Underwing whitish, axillaries and most coverts with dark fringes, forming lines. **TAIL** White, with clear-cut, broad, blackish-brown subterminal band. **BARE PARTS** Eye dark brown. Bill blackish, usually with pale flesh or yellowish-flesh base. Legs flesh-pink.

First-winter (figs. 12C, 14B and 14D) Acquired by post-juvenile head and body moult, which starts at fledging and is usually complete by late September.



44. First-winter Common Gull *Larus canus*, Humberside, January 1971 (Richard Vaughan)

45. First-winter Common Gulls *Larus canus*, Kent, March 1976 (Pamela Harrison)



HEAD As juvenile, but whiter. **BODY** Lower nape, breast or breast-sides and flanks with variable grey-brown mottling, streaks or spots, most dense on lower nape and breast-sides; underparts otherwise mainly white. Mantle uniform blue-grey.

Dark marks on rump and undertail less prominent than juvenile or lacking. **WINGS AND TAIL** As juvenile, but brown and blackish areas faded paler. **BARE PARTS** As juvenile, but bill with clear-cut black tip.

First-summer (fig. 14C. Underwing and tail similar to first-winter, 14D) Acquired by head and body moult, February to April.

As first-winter except: **HEAD AND BODY** Often whiter, less streaked. **WINGS AND TAIL** Brown and grey areas becoming very faded and whitish, and black areas browner, often bleached light brown, especially primary tips. Wings, therefore,

pale and contrasting with blue-grey mantle, giving saddle effect. **BARE PARTS** Base of bill and legs flesh, yellowish-flesh, greenish-grey or bluish-grey, much depending on light.



46. First-summer Common Gull *Larus canus*, Kent, April 1976 (Pamela Harrison).

Second-winter (fig. 14E) Acquired by complete moult, June to October.

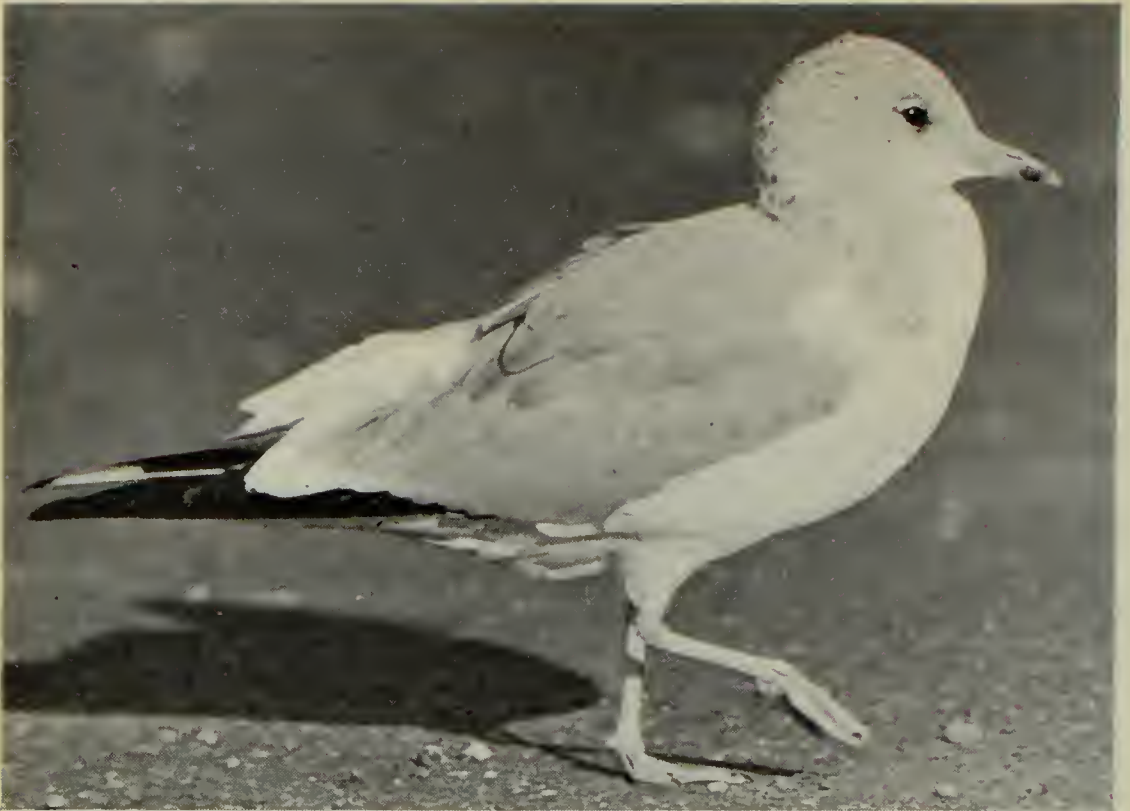
HEAD AND BODY As first-winter, but dark markings usually less extensive, especially on breast-sides and flanks. Rump and undertail white. **WINGS AND TAIL** As adult, but black extending to 6th to 8th primary and along leading edge of forewing onto primary coverts and alula. Primaries lack prominent white tips, and mirrors on

outer two are smaller. Some have a few brown median coverts and dark-centred tertials; individuals showing prominent traces of secondary bar or tail band are rare. **BARE PARTS** Eye brown. Bill yellowish, blue-grey or grey-green, with dark tip or subterminal band. Leg colours as bill.

Second-summer (wing and tail pattern similar to second-winter, fig 14E) Acquired by head and body moult, February to April.

As second-winter except: **HEAD AND BODY** White or very lightly marked.

WINGS Black areas faded browner, and tiny white primary tips reduced or lacking.



47. Second-winter Common Gull *Larus canus*, Co. Cork, October 1975 (Richard T. Mills)

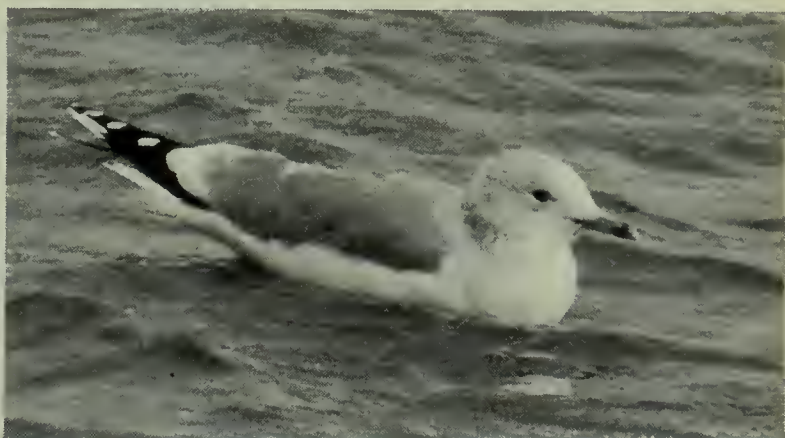
48. Second-winter Common Gull *Larus canus*, London, November 1976 (R. J. Chandler)





49. Second-winter (left) and adult winter Common Gulls *Larus canus*, Humberside, November 1970 (Richard Vaughan)

50. Adult winter Common Gull *Larus canus*, Somerset, winter 1974/75 (Wendy Dickson)



Adult winter/third-winter (wing and tail pattern as adult summer, fig. 14F) Acquired by complete moult, late summer to October.

HEAD White, with fine dark streaks and spots most dense on lower nape. Eye crescent dusky, and thin white crescents above and below eye. **BODY** Underparts and rump white, sometimes a few dark spots and streaks on breast-sides and flanks. Mantle uniform blue-grey. **WINGS** Clear-cut black wing tip confined to primaries and extending to 5th or 6th; prominent white tips to all except 1st, and

large mirrors on outer two (larger on 1st than 2nd). Remainder of wing uniform blue-grey, with thin white leading edge and scapular crescent and broad white trailing edge and tertial crescent. Underwing-coverts white. **TAIL** White. **BARE PARTS** Eye brown. Bill yellowish, often with greyish base and usually faint dark subterminal band. Legs yellowish or greenish.

Adult summer/third-summer (fig. 14F) Acquired by head and body moult, February to April.



51. Adult summer Common Gull *Larus canus*, Strathclyde, June 1976 (Pamela Harrison)

As adult winter except: HEAD White. PARTS Orbital ring red. Bill usually
 BODY Underparts white. WINGS White wholly yellowish-green.
 primary tips reduced or lacking. BARE

Mediterranean Gull *Larus melanocephalus* (figs. 12B and 14, plates 52-62).



Fig. 15. World distribution of Mediterranean Gull *Larus melanocephalus*, showing approximate regular breeding range (solid black) and approximate limits of winter/non-breeding range (black line). Has bred Hungary, German Democratic Republic, Austria, Estonian SSR, Netherlands, Belgium, France and England. Increasing in recent years in Britain, with over 50 records annually, mainly in southern coastal areas

IDENTIFICATION

Past comparison between Mediterranean and Black-headed Gulls is somewhat misleading. When perched, there is a rather superficial resemblance at all ages, but the distinctive appearance of Mediterranean

Gull in second-year and adult plumages render it unlikely to be overlooked. In first-year plumages, especially in flight, it is much more likely to be dismissed as a Common Gull, owing to its similar flight pattern. It is, however, smaller than Common Gull (nearer to Black-headed) with a

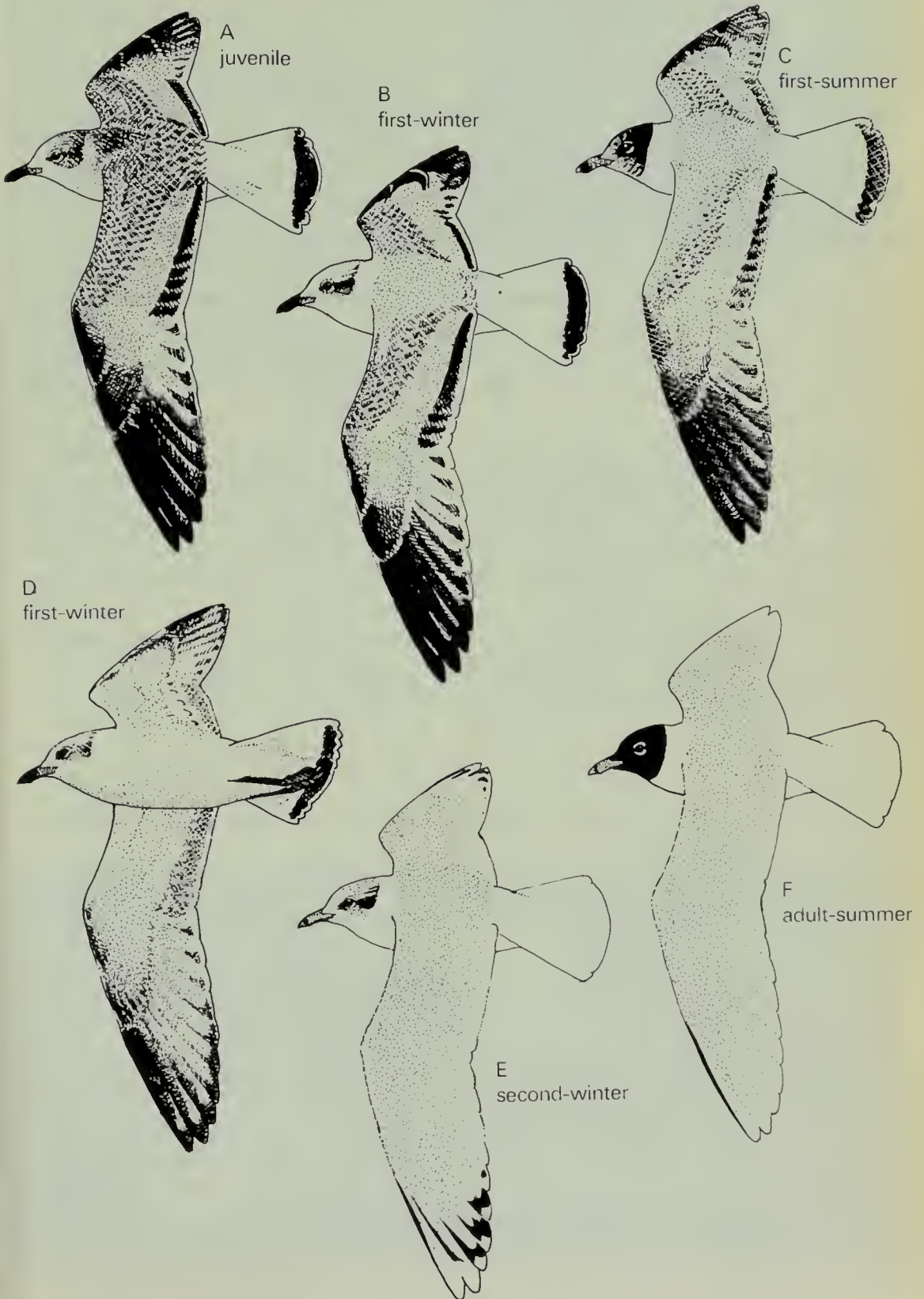


Fig. 16. Mediterranean Gulls *Larus melanocephalus* in flight

marginally stouter bill which (mainly due to its dark colour) often appears blob-ended or heavy and drooping. It appears longer-legged and has a strutting gait, often with head hunched between the shoulders. In flight it appears heavy-bodied and bull-necked, with less angled wings, stiffer wingbeats and less spread tail.

First-years differ further from Common Gull in having blacker outer primaries and secondary bar, and paler grey midwing panel, giving a more contrasting upperwing pattern. The extensive white on the inner webs of the outer primaries is sometimes visible from above when the wing is fully spread (Common Gull has all-dark outer primaries), and the underwing is much whiter, with the dark outer primaries and secondary bar showing prominently through the wing. The tail band is thinner, especially at the sides. The underparts and head are white, the latter with dark markings of variable extent, in winter usually confined to more or less well-defined fine dark streaking behind the eye. Juveniles have a more prominently scaled brown mantle, and the grey mantle of subsequent plumages is much paler. Bill and leg colour is highly variable in the first year, darker than Common Gull or with striking orange or reddish coloration.

Second-years and adults have a distinctive appearance, which is unlikely to be confused with any other species of gull. Second-years are readily aged by the black markings near the tips of the outer primaries. Adults have a black outer web on the outer primary, but otherwise the wings and mantle are pale pearly-grey, shading to white on the secondary and primary tips. In summer, the hood is black and extends farther down the nape than on Black-headed Gull, and the bill is scarlet, much paler in tone than the black hood (unlike Black-headed Gull), often with a dark subterminal mark and yellowish tip; the legs are scarlet.

AGEING

Juvenile: scaly brown mantle, extensive brown on head and breast-sides (summer to September).

First-winter: uniform pale grey mantle, blackish outer primaries, secondaries and tail band, brown carpal-bar, winter head pattern (July to April).

First-summer: as first-winter, but hood sometimes developed to variable extent, wing pattern faded, and brown carpal-bar reduced or lacking (March to October).

Second-winter: as adult winter, except for variable amount of black near tips of outer primaries (July to April).

Second-summer: as second-winter, but hood often fully developed (March to October).

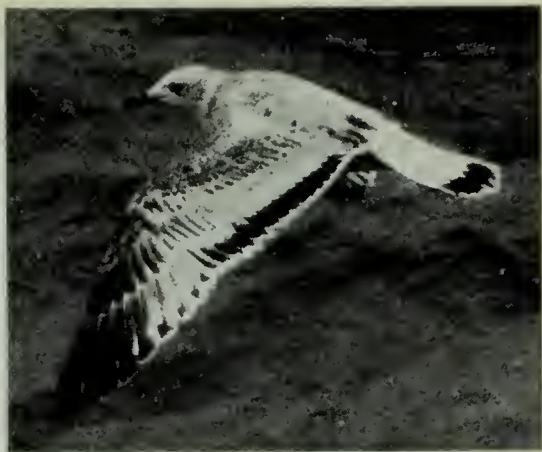
Adult winter/third-winter: adult wing pattern (black confined to outer web of outer primary), winter head pattern (August to March).

Adult summer/third-summer: adult wing pattern, full black hood (February to October).

DETAILED DESCRIPTIONS

Juvenile (fig. 16A. Underwing and tail similar to first-winter, 16D)

HEAD White or buff-washed, with more or less well-defined partial hood, formed by brown markings most prominent on ear-coverts and hind crown, separated from brown lower nape by white collar. Thin white crescents above and below eye, and dusky eye-crescent. **BODY** Underparts and rump mainly white, breast-sides washed buff. Lower nape and mantle rich brown or ginger-brown; mantle feathers edged whitish, forming prominent sealy pattern. **WINGS** Carpal-bar brown or ginger-brown, with paler feather fringes. Tertiaries dark-centred, with clear-cut broad whitish fringes. Greater coverts mainly pale grey, forming contrasting pale midwing panel. Secondaries black, with fine white edges and broad tips. Outer webs of outer five or six primaries and their coverts mainly black; inner primaries mainly grey, with subterminal black marks decreasing in size inwards; inner webs of outer primaries have extensive white, reaching nearly to tips; sometimes, outer primary (rarely outer two) all-black. Primary coverts tipped paler. Underwing mainly white,



52. Mediterranean Gull *Larus melanocephalus* near end of moult from juvenile to first-winter, Bulgaria, September 1977 (Lasse J. Laine)

with many fewer dark markings on coverts than Common Gull. **TAIL** White with clear-cut black subterminal band, narrower and often broken on outer feathers. **BARE PARTS** Eye dark brown. Bill mainly blackish, with a usually small area of pale grey or flesh at base. Legs blackish.

First-winter (figs. 12B, 16B and 16D) Acquired by post-juvenile head and body moult, which starts at fledging and is usually complete by late September.

As juvenile except: **HEAD** White with blackish markings of variable extent, typically rather clear-cut streak (or patch of fine streaks) behind from eye, often extending diffusely over rear crown, never an isolated round ear-spot as on Black-

headed Gull. Eye-crescent blackish. **BODY** Underparts white. Mantle uniform pale pearly-grey, same shade as grey of wings. **WINGS AND TAIL** Brown of carpal-bar faded (often very ginger-brown), and black areas slightly faded, and white tips and fringes of



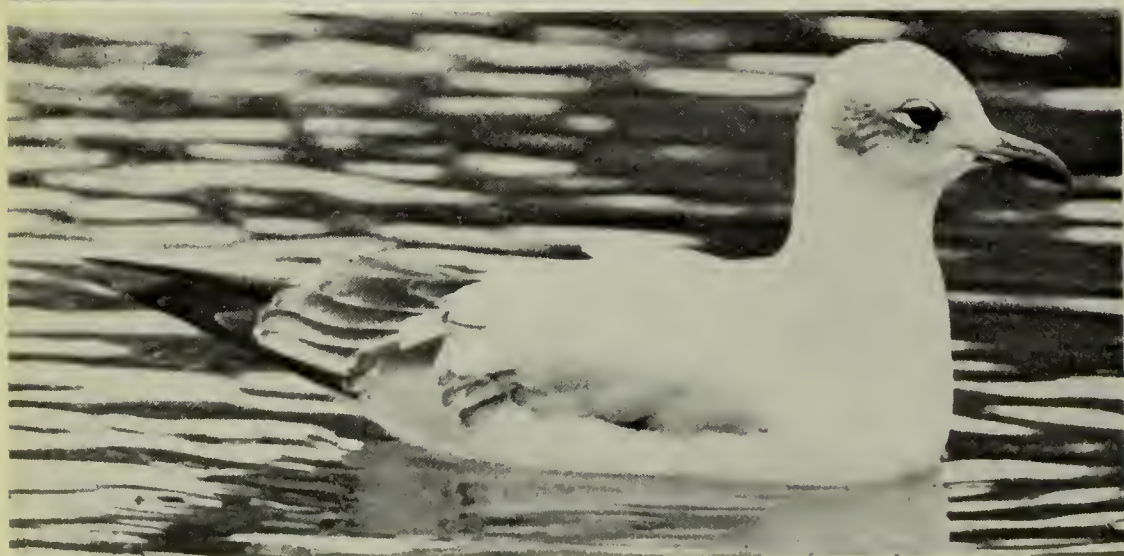
53. First-winter Mediterranean Gull *Larus melanocephalus*, Surrey, October 1978 (R. J. Chandler)

inner primaries, secondaries, tertials and tail reduced. BARE PARTS Bill sometimes wholly blackish or brownish-black, but

usually with pale base of variable extent' with clear-cut or diffuse blackish tip' Colour of base highly variable, from buff,



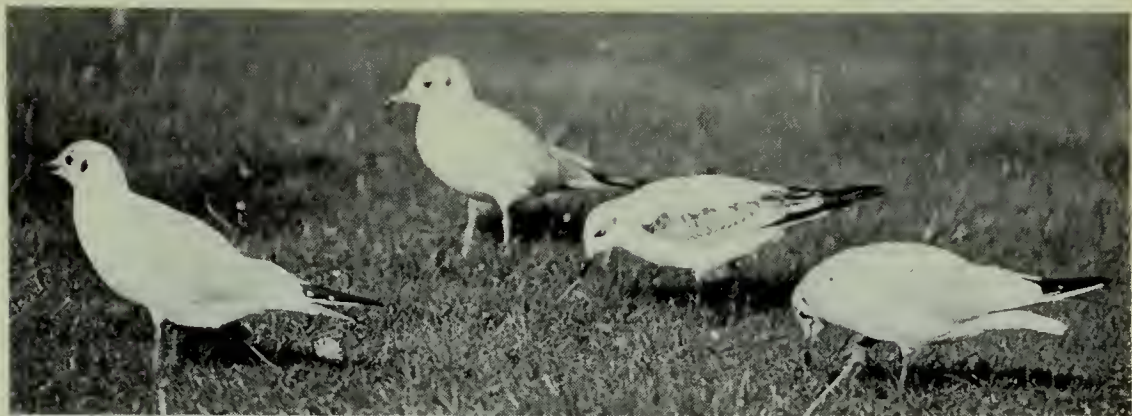
54. First-winter Mediterranean Gull *Larus melanocephalus*, Surrey, October 1978 (R. J. Chandler)



55. First-winter Mediterranean Gull *Larus melanocephalus*, Surrey, October 1978 (R. J. Chandler)

flesh or yellowish, through orange to red. Legs similarly variable from blackish

or grey (sometimes with olive-green tinge) through orange to red.



56. First-winter Mediterranean Gull *Larus melanocephalus* with adult Black-headed Gulls *L. ridibundus*, Surrey, October 1978 (R. J. Chandler)

First-summer (fig. 16C. Underwing and tail similar to first-winter, 16D) Acquired by head and body moult, February to April.

As first-winter except: HEAD Black head markings usually more extensive; a few acquire full hood. WINGS AND TAIL Becoming very worn and faded in some, although black areas fade less than on most Common Gulls. A few replace most inner wing-

coverts, and thus lack brown carpal-bar. BARE PARTS Bill and leg colour highly variable, much as first-winter, but some may acquire near-adult coloration and bill pattern.

The least advanced individuals have dull bare parts, and wing and head patterns little different from first-winter, while the most advanced have adult-like bill and legs, well-developed or complete hood, and lack a carpal-bar.

Second-winter (fig. 16E) Acquired by complete moult, June to October.



57. Second-winter Mediterranean Gull *Larus melanocephalus*, Belgium, September 1976 (P. Devillers)

As adult winter except: WINGS Outer three to six primaries with subterminal black marks of variable extent and pattern.

BARE PARTS Bill flesh to reddish, with dark tip or subterminal band. Legs as adult winter or more orange-red.

It seems likely that a few advanced individuals may be indistinguishable from adult at this age.

Second-summer (wing and tail pattern similar to second-winter, fig. 16E) Acquired by head and body moult, February to April.

As second-winter except: HEAD Hood fully developed or with white flecking. WINGS White primary tips reduced or

lacking. BARE PARTS Bill and legs much as adult summer.



58. Mediterranean Gull *Larus melanocephalus* moulting from second-summer to third-winter (adult winter), with adult Black-headed Gull *L. ridibundus* moulting into winter plumage, Cornwall, August 1968 (J. B. & S. Bottomley)

59. Adult winter Mediterranean *Larus melanocephalus* (right) and Black-headed Gull *L. ridibundus*, Kent, autumn 1964 (Pamela Harrison)





60. Adult winter Mediterranean Gull *Larus melanocephalus* (left) with first-winter Black-headed Gull *L. ridibundus*, USSR, November 1976 (Pamela Harrison)

Adult winter/third-winter (wing and tail pattern as adult summer, fig. 16F) Acquired by complete moult late summer to October.

HEAD AND BODY As first-winter. **WINGS** Pale pearly-grey; primaries shading to white at tips; 1st with thin black line of variable extent on outer web. Secondaries and underwing mainly white. **TAIL** White.

BARE PARTS Bill and legs orange, red or blackish; bill with dark tip or indistinct subterminal mark, and often with yellowish at extreme tip.

Adult summer/third-summer (fig. 16F) Acquired by head and body moult, January to April.

As adult winter except: **HEAD** Hood jet black, extending farther down nape than on Black-headed Gull. Prominent white crescent above and below eye. **BARE PARTS**

Orbital ring red. Bill scarlet, with or without thin blackish subterminal smudge or band, sometimes with yellow or yellowish at extreme tip. Legs scarlet.



61. Adult Mediterranean Gull *Larus melanocephalus* acquiring summer plumage, Surrey, February 1978 (R. J. Chandler)



62. Adult summer Mediterranean Gulls *Larus melanocephalus*, Greece, May 1968 (Wolfgang Makatsch)

Ring-billed Gull *Larus delawarensis* (figs. 12A and 18, plates 63-73).



Fig. 17. World distribution of Ring-billed Gull *Larus delawarensis*, showing approximate breeding range (solid black) and approximate southern limit of winter/non-breeding range (black line). Rare vagrant to Europe; in Britain, has been recorded annually in very small numbers since first in 1973

IDENTIFICATION

Ring-billed Gull resembles Common Gull, but is usually obviously larger and heavier-bodied, with stouter bill, slightly longer legs, and more fierce expression caused by its less rounded head and often faint dark furrow or brow over the eye. The mantle is paler, and perched second-years and adults lack prominent white tertial crescents which are obvious on Common Gull. It has a plover-like gait, perhaps an effect of its longer legs. The heavier structure, fierce expression and pale grey mantle may recall Herring Gull, which, however, is much larger.

In first-year plumages, further differences from Common Gull are the more contrasted upper and underwing patterns (due mainly to the blacker outer primaries and secondary bar), the less clear-cut tail band, the usually clearly spotted (rather than mottled) nape, and the defined spots or crescentic markings on the breast sides and flanks (rather than



Fig. 18. Ring-billed Gulls *Larus delawarensis* in flight

indistinct mottling and streaking), although these may be reduced or lacking in first-summer plumage. The tertials tend to be darker, with thinner, clear-cut pale fringes. Because of its paler mantle colour, Ring-billed lacks the contrasting dark saddle which is shown by most first-year Common Gulls. The band on the bill, and the clear yellow colour of the bill and legs, begin to develop in the first summer; Common Gull invariably retains a dark-tipped bill throughout its first year.

Second-years resemble adults, but are readily aged by the more extensive black on the forewing; unlike Common Gull, they have only one small mirror, if any, and most have prominent traces of a secondary bar and tail band which are rarely shown by Common Gull. The yellow of the bill and legs, and the thick, clear-cut black band on the bill are usually well developed by the second year; Common Gulls may also have a band on the bill at this age, but it is usually less well-defined and quickly becomes thinner than on Ring-billed Gull. Adult and some second-year Ring-billeds have a pale eye; the others in this group are dark-eyed at all ages.

AGEING

Juvenile: scaly brown mantle, and extensive dark markings on head and underparts (summer to September).

First-winter: dusky head and body markings, uniform grey mantle, blackish outer primaries, secondaries and tail band, brown carpal-bar, and black-tipped bill (July to April).

First-summer: as first-winter, but head and body whiter, wing pattern faded paler, and band on bill usually beginning to develop (March to October).

Second-winter: wings uniform grey, with black tip extending along leading edge of forewing, one small mirror (or none), white primary tips tiny or lacking, usually traces of secondary bar and tail band, and much dusky on head (July to April).

Second-summer: as second-winter, but head white or lightly marked. Yellow bill colour and band usually well developed (March to October).

Adult winter/third-winter: black on wing-tip confined to primaries, usually two mirrors, prominent white primary tips (obvious when perched), dusky head markings, clear-cut black band on yellowish bill, and yellowish legs (August to March).

Adult summer/third-summer: as adult winter, but head white, white primary tips may be reduced or lacking, clear-cut black band on bill, and bill and legs bright yellow (March to October).

DETAILED DESCRIPTIONS

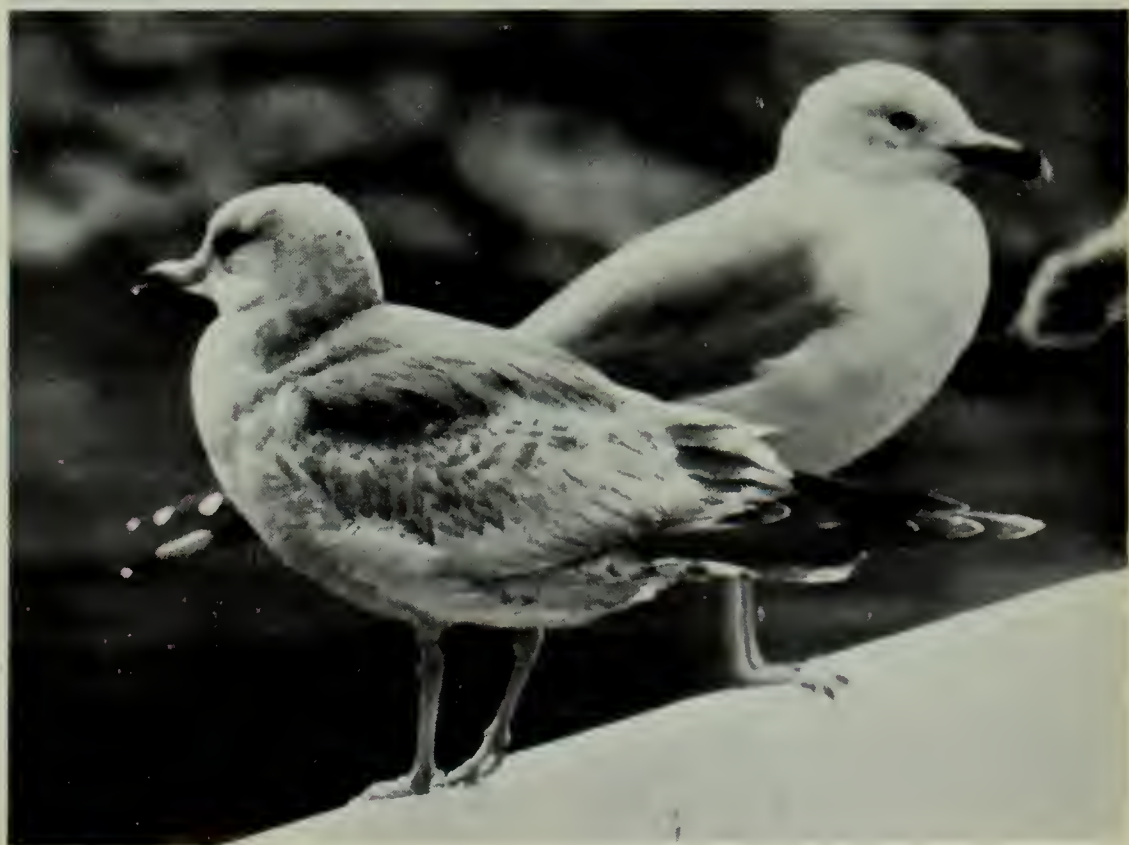
Juvenile (not illustrated, but wing and tail pattern similar to first-winter, figs. 12A, 18A and 18E).

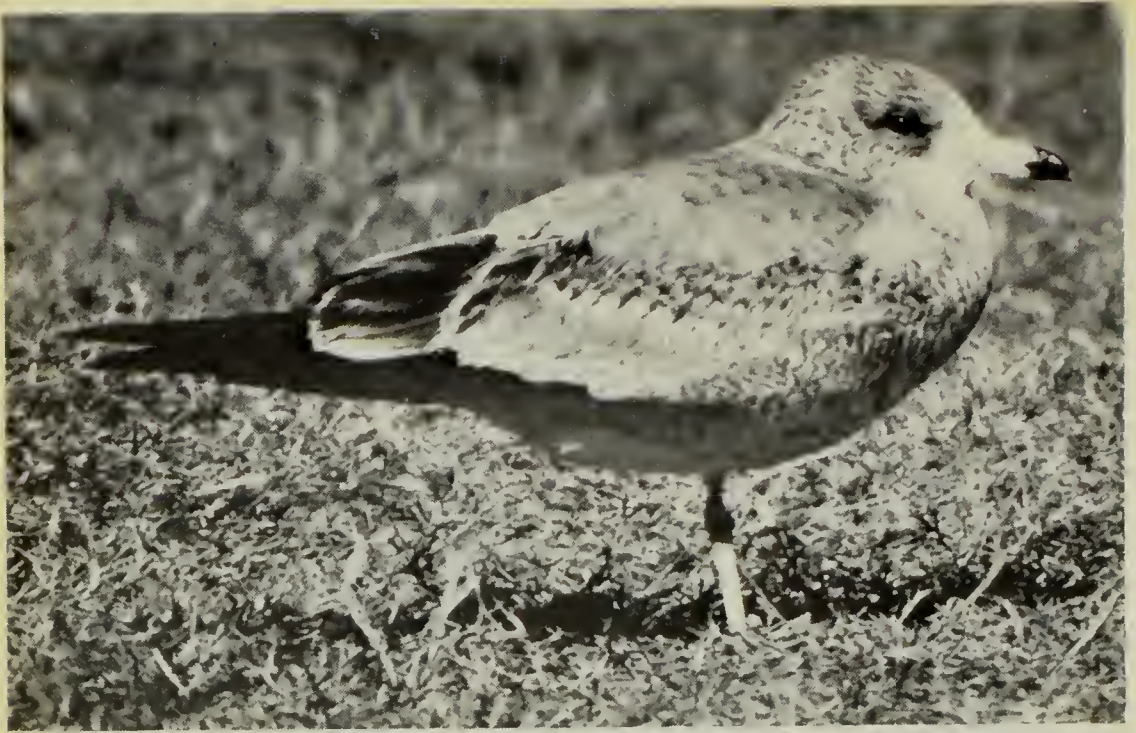
Similar to juvenile Common Gull except: body Lower nape usually with spots more well defined, and breast and	flanks less uniform, with distinctive scaly pattern of dark crescents, often forming lines down flanks. Mantle buff, with
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63. First-winter Ring-billed Gull *Larus delawarensis*, USA, February 1974 (Davis Finch)

64. First-winter Ring-billed Gull *Larus delawarensis* (left) and adult moulting into summer plumage, USA, March 1976 (Roger Higson)





65. First-winter Ring-billed Gull *Larus delawarensis*, USA, December 1975 (Robert Barber)

66. Ring-billed Gull *Larus delawarensis* moulting from first-winter to first-summer plumage, USA, April 1977 (Jean Terschuren)



complex scaly pattern. WINGS Dark areas blacker and less extensive on inner primaries. Greater coverts and inner primaries largely pale grey, giving more contrasted upperwing pattern. Tertiaries darker, with thinner, neater pale fringes. Underwing-coverts with less dark. TAIL

Subterminal band often broader, not clear-cut, and with whitish breaks and mottles, especially on outer feathers. Some normal variations of first-year wing and tail pattern are illustrated in figs. 18A and 18B. BARE PARTS Extreme tip of bill often whitish.

First-winter (figs. 12A, 18A and 18E) Acquired by post-juvenile head and body moult, which starts at fledging and is usually complete by late September.

As juvenile except: HEAD AND BODY Often whiter, with fewer dark marks. Mantle uniform pale grey (same shade as grey of wings), sometimes with a few brown juvenile feathers retained. WINGS

AND TAIL Brown and blackish areas slightly faded, and white tips or fringes on inner primaries, secondaries, tertiaries and tail reduced.

67. First-winter Ring-billed Gull *Larus delawarensis*, USA, spring 1976 (Roger Higson)



68. First-winter Ring-billed Gull *Larus delawarensis*, USA, September 1974 (P. F. Nichols)

First-summer (fig. 18B. Underwing and tail similar to first-winter, 18E) Acquired by head and body moult, February to April.

As first-winter except: **HEAD AND BODY** Dark markings reduced, or lacking, except for spots on nape. **WINGS AND TAIL** Brown and grey areas often faded and whitish, and black areas faded browner, but little or no contrast with pale grey mantle, thus lacking prominent saddle effect of first-

summer Common Gull. White tips or fringes to inner primaries, secondaries, tertials and tail reduced or lacking. **BARE PARTS** Band on bill and yellowish colour of bill and legs usually beginning to develop.



69. First-summer Ring-billed Gull *Larus delawarensis*, USA, April 1977 (Jean Terschuren)

Second-winter (figs. 18C and 18F) Acquired by complete moult, June to October.

Similar to second-winter Common Gull except: **HEAD AND BODY** Dark markings on nape and (if present at all) on breast-sides and flanks, more distinctly spotted. Mantle (and inner wings) pale grey, much paler than Common Gull. **WINGS AND TAIL** Only one mirror, on outermost primary (if any), often visible only from below. Most have prominent traces of secondary bar and tail band, and prominently dark-centred tertials. White tertial fringes thin and shaded into pale grey mantle, thus lacking prominent tertial crescent which is obvious on perched Common Gulls. **BARE PARTS** Pale eye, thick black band on the bill, and yellow of bill and legs well developed in some.



70. Second-winter Ring-billed Gull *Larus delawarensis*, USA, March 1976 (Roger Higson)

Second-summer (wing and tail pattern similar to second-winter, figs. 18C and 18F) Acquired by head and body moult, February to April.

As second winter except: **HEAD AND BODY** White, or with a few light spots on nape. **WINGS** Black areas faded paler, and tiny

white primary tips lacking. **BARE PARTS** Pale eye, thick band on bill and yellow of bill and legs well developed.

Adult winter/third-winter (wing and tail pattern as adult summer, fig. 18C) Acquired by complete moult late summer to October.

Similar to adult winter Common Gull except: HEAD Dark markings more distinctly spotted. BODY Mantle (and inner wing) much paler grey. WINGS White mirrors on 1st and 2nd primaries invariably much smaller, and white trailing edge to inner wing and tertial fringes thinner and less prominent. BARE PARTS Pale eye obvious at close range. Orbital ring dark. Bill with broad, clear-cut black band, dull yellow or greyish-yellow base and yellow tip. Legs yellowish.



71. Adult winter Ring-billed Gull *Larus delawarensis*, USA, March 1976 (Roger Higson)

Adult summer/third-summer (fig. 18D) Acquired by head and body moult, February to April.

As adult winter except: HEAD White. orange-red. Legs and black-banded, bill bright yellow. WINGS White primary tips reduced or lacking. BARE PARTS Orbital ring and gape

72. Adult summer Ring-billed Gull *Larus delawarensis*, USA, March 1976 (Roger Higson)





73. Adult summer Ring-billed Gulls *Larus delawarensis*, USA, March 1968 (P. Devillers)

Laughing Gull *Larus atricilla* (figs. 12E and 20, plates 74-83)



Fig. 19. World distribution of Laughing Gull *Larus atricilla*, showing approximate breeding range (solid black) and approximate limits of winter/non-breeding range (black line). Rare vagrant to Europe; in Britain and Ireland, total of nine since first in 1923, seven since 1966

IDENTIFICATION

Laughing Gull has a distinctive appearance at all ages, and is unlikely to be confused with any other gull except Franklin's.

Laughing is slightly smaller than Common Gull, but with proportionately longer wings (which give an attenuated look when perched and a rakish, long-winged silhouette in flight), longer bill (which often looks heavy and drooping) and longer legs. The grey upperparts are much darker than those of Common Gull, close in tone to those of the British race of Lesser Black-backed Gull *L. f. graellsii*.

In first-winter plumage, the head, nape, breast and flanks are extensively dark grey, shading to whitish on the chin, forehead and belly. The inner wing-coverts are mainly brown, contrasting with the mainly black primaries, primary coverts and secondaries. The tail is grey, with a broad black subterminal band, and the rump is white. First-summer plumage is similar, but often with a partial or full hood, and the wing-coverts are often faded to pale patchy brown.

Second-years closely resemble adults, but are readily aged by the more extensive black on the wing (extending strongly on to the primary coverts), and most have traces of a secondary bar or tail band.

Adults have uniform dark grey mantle and wings, the latter with a broad white trailing edge, and black tip without mirrors confined to the



Fig. 20. Laughing Gulls *Larus atricilla* in flight

outer primaries. In summer, the bill and legs are dull red, and the extensive black hood has prominent white crescents above and below the eye. In winter, the bill and legs are blackish, and the head has a dusky grey-and-black partial hood.

AGEING

Juvenile: scaly brown mantle (summer to September).

First-winter: uniform grey mantle, extensive grey on nape, breast and flanks, brown inner wing-coverts, mainly blackish primaries and secondaries, and white rump contrasting with grey tail, which has broad black band (July to April).

First-summer: as first-winter, but less grey on nape and head, inner wing-coverts faded pale brown, and contrasting dark grey mantle (March to October).

Second-winter: wings uniform grey, with black tip extending along leading

74. Juvenile Laughing Gull *Larus atricilla*, USA, August 1976 (Alan Brady)



edge of forewing, usually traces of secondary bar and tail band, winter head pattern, mainly white underparts, and blackish bill and legs (July to April).

Second-summer: as second-winter, but hood partially or fully developed, and bill and legs usually dull reddish (March to October).

Adult winter/third-winter: black of wing tip mainly confined to primaries, which have neat white tips; winter head pattern; bill blackish, with red line on culmen-ridge near tip; and legs blackish (August to March).

Adult summer/third-summer: as adult winter, but full black hood, and dull red bill and legs (February to October).

DETAILED DESCRIPTIONS

Juvenile (not illustrated, but wing and tail pattern similar to first-winter, figs. 12E, 20A and 20C).

HEAD Mainly brown, darkest on eye-crescent, ear-coverts and hind crown. Forehead and throat slightly paler, and crescent above and below eye whitish. **BODY** Nape, broad breast-band and flanks uniform grey-brown. Belly, undertail-coverts and rump dull white. Mantle brown, with pale feather fringes giving scaly appearance, most prominent on lower back. Lesser and median coverts and tertials mainly brown like the mantle, with paler feather fringes; greater coverts grey-brown, with paler fringes. Secondaries

black, with neat white edges and prominent white tips. Outer primaries and coverts wholly blackish, with thin white fringes at tips from 3rd to 5th primary inwards, and dull grey on outer and inner webs increasing from the 4th to 6th inwards. Underwing-coverts mainly dull white, with extensive dusky markings. **TAIL** Outer webs dull grey, inner webs whitish, with broad black subterminal band always extending to outer feathers; thin white terminal fringe. **BARE PARTS** Bill black. Legs blackish.

75. Laughing Gull *Larus atricilla* near end of moult from juvenile to first-winter plumage, USA, September 1974 (P. F. Nichols)



First-winter (figs. 12E, 20A and 20C) Acquired by post-juvenile head and body moult, which starts at fledging and is usually complete by October.

As juvenile except: **HEAD** Grey, with darker patch on ear-coverts extending over rear crown and above eye. Forehead,

throat and crescents above and below eye whitish. **BODY** Nape, breast-band, flanks and mantle uniform or mottled dark grey.



76 & 77. Left, first-winter Laughing Gulls *Larus atricilla*: top, Dorset, April 1969; bottom, USA, October 1978 (J. B. & S. Bottomley)



78. Worn first-winter Laughing Gull *Larus atricilla*, Cuba, February 1976 (J. V. Jensen)

First-summer (fig. 20B. Underwing and tail similar to first-winter, 20D) Acquired by head and body moult, February to April.

As first-winter except: **HEAD** Grey less extensive or often with hood of variable extent. **BODY** Grey on nape, breast and flanks may be less extensive. **WINGS AND**

TAIL Brown of inner wing-coverts often faded to patchy pale brown, and white terminal fringes to primaries, secondaries and tail reduced or lacking.

Second-winter (fig. 20D) Acquired by complete moult, June to late September.

HEAD White forehead and throat with indistinct partial grey hood, darkest in patch on ear-coverts extending over rear crown. Eye-crescent blackish. Crescents above and below eye white. **BODY** Underparts, neck and rump white, with pale grey clouding on lower nape, breast-sides and flanks. Mantle uniform dark grey, with prominent white tertial crescent when perched. **WINGS** Uniform dark grey, with prominent white trailing edge to secondaries and inner primaries. Small white tips on primaries from about 4th inwards. Usually, variable number of secondaries with blackish on outer webs, forming partial secondary bar. Outer four or five primaries black, extending along leading edge of wing on to coverts and alula. Sub-terminal black from 5th to 6th or 8th.



79. Second-winter Laughing Gull *Larus atricilla*, USA, September 1974 (P. F. Nichols)

Underwing-coverts white. **TAIL** Mainly white, or with grey at base, often with black or grey subterminal spots of varying extent forming partial broken tail band. Outer and central feathers white. **BARE PARTS** As juvenile.

Second-summer (wing and tail pattern similar to second-winter, fig 20D) Acquired by head and body moult, February to April.

As second-winter except: **HEAD** Black usually more extensive, and many acquire full hood as adult summer. **BODY** Grey

clouding on breast-sides and flanks usually lacking. **BARE PARTS** Bill usually dull red, with dark tip. Legs usually dull red.

Adult winter/third-winter (wing and tail pattern as adult summer, fig. 20E). Acquired by complete moult, late summer to October.

As second-winter except: **BODY** Very pale grey clouding confined to lower nape and breast-sides. **WINGS** Clear-cut black

wing-tip (in some lights showing little contrast with rest of wing) extending to 5th or 6th primary; neat white tips from



80. Adult winter Laughing Gull *Larus atricilla*, USA, October 1978 (J. B. & S. Bottomley)

3rd or 4th increasing in size inwards. Outer one or two primary coverts usually with some black. TAIL White. BARE PARTS

Bill black or blackish-brown, with small red line on culmen-ridge near tip. Legs blackish or grey.

Adult summer/third-summer (fig. 20E) Acquired by head and body moult, February to April.



81. Adult summer Laughing Gull *Larus atricilla*, USA, July 1977 (Alan Brady)



82. Adult summer Laughing Gull *Larus atricilla*, USA, July 1977 (Alan Brady)

As adult winter except: HEAD Slaty-black hood fully developed. Prominent white crescents above and below eye. BODY Nape and breast-sides white. WINGS White

primary tips reduced or lacking. BARE PARTS Orbital ring, gape, bill and legs dull red.

83. First-winter, second-winter and adult winter Laughing Gulls *Larus atricilla*, USA, October 1978 (J. B. & S. Bottomley)



Franklin's Gull *Larus pipixcan* (figs. 12D and 22, plates 84-94)

Fig. 21. World distribution of Franklin's Gull *Larus pipixcan*, showing approximate breeding range (solid black) and approximate limits of winter/non-breeding range (black line). Rare vagrant to Europe; in Britain, only five records ever: Hampshire and Sussex in 1970, Norfolk in 1976, and Cleveland and Suffolk in 1977

IDENTIFICATION

This highly migratory and distinctive small gull is unlikely to be confused with any other species except Laughing Gull: both are vagrants to the west Palearctic from America.

Franklin's is on average slightly smaller than Black-headed Gull (thus distinctly smaller than Laughing, which is slightly smaller than Common Gull), with a more rounded wing-tip. On the ground, it has a compact, horizontal outline reminiscent of the smaller Little Gull, and in flight it looks rather short-tailed, without the long-winged silhouette of Laughing Gull. The bill is rather stout, but not noticeably long and drooping like that of Laughing Gull, and the legs are proportionately shorter. The upperparts are much darker grey than Common Gull. In winter, it has a distinctive, clear-cut half-hood, confined mainly to the ear-coverts and rear crown, with thick white crescents above and below the eye: a pattern unlike any other west Palearctic gull.

As well as the size and structural differences, first-winters differ from Laughing Gulls of the same age in having the clear-cut half-hood, almost wholly white underparts without the extensive grey breast-band and flanks, small white tips to most of the primaries in fresh plumage, mainly grey inner primaries, uniformly whitish underwing-coverts, and thinner black band which does not extend to the all-white outer feathers. First-summer and second-years are less readily separable from second-year and adult Laughing Gulls, but the distinctive half-hood in winter, the thicker white crescents above and below the eye, and the prominently white-tipped primaries (obvious when perched), as well as the size and structural differences, are the best distinctions. When fully adult, further differences are the distinctive wing pattern, usually pink-flushed underparts in summer, and the diagnostic grey-centred tail, which is unique among adult gulls.

Franklin's Gull appears to have a complete moult in both spring and autumn, unlike any other gull. The evidence for this, based on museum

skins, seems conclusive for the great majority, although a very few specimens appear not to fit into this moult pattern. Dr P. Devillers (*in litt.*), from field study in South America, considers that there is no evidence to rule out a protracted complete winter moult, rather than two complete moults a year. It may be that there is individual variation in the extent or



Fig. 22. Franklin's Gulls *Larus pipixcan* in flight

timing of the two moults, or that there is an arrested moult linked with migration, similar to that found in most *Sterna* terns. The descriptions here are based on the concept of a twice-yearly complete moult, into which the vast majority of specimens fit, but the possibility that this is incorrect, at least for some individuals, should be borne in mind.

AGEING

Juvenile: scaly brown mantle (summer to October).

First-winter: half-hood, uniform grey mantle, brown inner wing-coverts, and blackish primaries, secondaries and tail band (August to May).

First-summer: hood developed to variable extent, grey mantle and inner wings, no white between grey of primaries and extensive black wing-tip, the latter extending on to primary coverts, and sometimes a partial secondary bar and indistinct partial tail band (April to September).

Second-winter: as adult winter, but black on primaries more extensive, with little or no white division from grey of primary bases (August to May).

Adult summer/second-summer: as adult winter, but full black hood and pale pink flush on underparts (April to September).

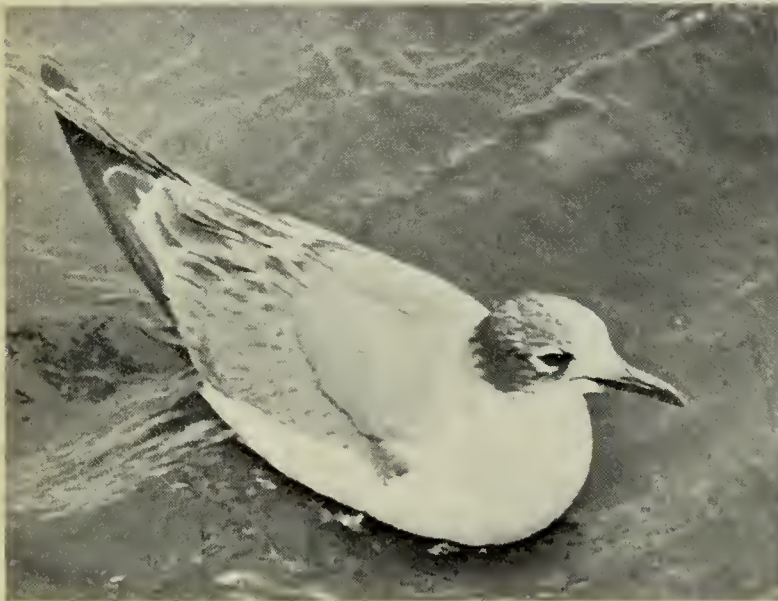
Adult winter/third-winter: half-hood, grey mantle and wings, extensive white division between grey primary bases and small black subterminal marks, large white tips to all primaries, and tail white with grey centre (August to May).

DETAILED DESCRIPTIONS

Juvenile (not illustrated, but wing and tail pattern similar to first-winter, figs 12D, 22A and 22B).

HEAD Forehead, throat and crescents above and below eye whitish. Eye-crescent, ear-coverts and rear crown mainly uniform dark grey-brown, more streaked on crown, forming clear-cut half-hood. **BODY** Underparts and rump white, breast-sides faintly washed brown. Nape

and mantle brownish; mantle with paler feather fringes, giving indistinct scaly pattern. **WINGS** Tertiaries and median and lesser coverts brownish with paler fringes. Greater coverts mainly uniform brownish-grey. Secondaries grey-brown, with blackish centres and prominent white tips



84. First-winter Franklin's Gull *Larus pipixcan*, Galapagos, December 1976 (Norman van Swelm)

forming white trailing edge to inner wing. Outer primaries and coverts mainly black, with grey on outer webs increasing inwards from 3rd or 4th, and black decreasing to subterminal band on 6th or 7th. Small white tips on outer primaries increasing in size inwards to 5th or 6th, remainder with prominent white fringes

at tips. Underwing-coverts mainly white. TAIL Mainly pale grey, with black subterminal band, broadest in centre and usually not extending to outer pair of feathers, which are wholly white. BARE PARTS Bill blackish, sometimes shade paler at base. Legs blackish.

First-winter (figs. 12D, 22A and 22B) Acquired by post-juvenile head and body moult, summer to October.



85. Franklin's Gull *Larus pipixcan* in worn first-winter plumage, Chile, February 1976 (P. Devillers)

86. Franklin's Gull *Larus pipixcan* in moult from first-winter to first-summer, Chile, February 1976 (Jean Terschuren)



As juvenile except: HEAD Half-hood blackish-brown, with thick white crescents above and below eye. BODY Breast-sides faintly washed grey. Nape and mantle uniform dark grey; mantle sometimes

finely streaked with brown. WINGS Brown areas becoming faded paler, and pale tertial fringes and small white tips to outer primaries reduced or lacking.

First-summer (fig. 22C) Acquired by complete moult, January to May.

HEAD Hood fully or partially developed, most with white flecking on forehead and throat. Thick white crescents above and below eye. BODY Mantle uniform dark grey, remainder white; underparts sometimes with pale pink flush. WINGS Dark grey, with broad white trailing edge, outer five or six primaries with neat white tips decreasing in size outwards. Black on outer five or six primaries decreasing in extent

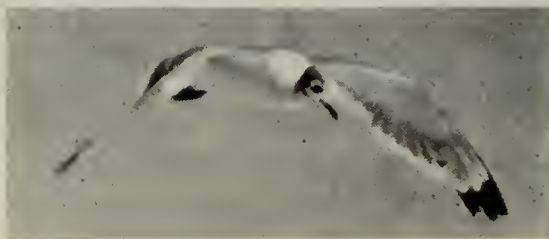
inwards to subterminal mark on 5th or 6th. Outer primary coverts brownish, with prominent dark centres. Variable number of secondaries have dark centres, forming indistinct secondary bar. TAIL Terminal fringe and sides white, with grey centrally darkest towards tip, sometimes also with dark subterminal spots forming indistinct partial band. BARE PARTS Bill and legs blackish, or bill reddish at base.

Second-winter (fig. 22D) Acquired by complete moult, July to October.

As first-summer except: HEAD Half-hood, like first-winter, but blacker. BODY Underparts white. WINGS Black on primaries less extensive, with complete black outer web only on 1st, and subterminal black bands on 3rd to 5th, and sometimes subterminal black spot on 6th. Small area of white divides black on 3rd to 6th from grey bases. Outer primaries usually with

large white tips increasing in size inwards to 5th or 6th, and 1st often with small mirror on inner web near tip. Outer primary coverts grey, sometimes with dusky centres. No partial secondary bar. TAIL White terminal fringe and sides, grey centrally. BARE PARTS Bill blackish or brownish with red at tip. Legs blackish or dull red.

87. Franklin's Gull *Larus pipixcan* in moult from second-winter to second-summer, Chile, January 1976 (P. Devillers)



88. Second-winter Franklin's Gull *Larus pipixcan*, Suffolk, February 1978 (M. Parker)



89. Franklin's Gull *Larus pipixcan* in moult from second-winter to second-summer, Chile, February 1976 (P. Devillers)



90. Franklin's Gulls *Larus pipixcan* in moult from second-winter to second-summer, Chile, February 1976 (P. Devillers)

Adult summer/second-summer (fig. 22E) Acquired by complete moult, January to May.

HEAD Full slaty-black hood, with thick white crescents or oval patches posteriorly above and below eye. **BODY** As first-summer, with pale pink flush on underparts. **WINGS** As second-winter, except black usually much less extensive, some-

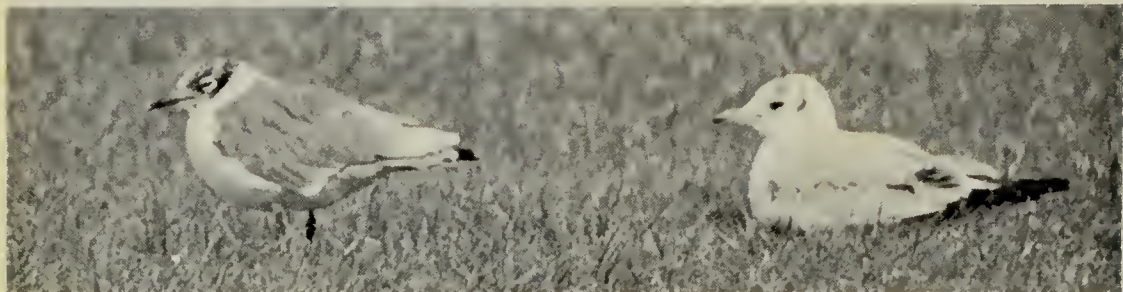
times barely extending to 5th primary and divided from grey remainder by broad band of white across primaries. Larger white tips than second-winter. Pattern of



91 & 92. Adult summer Franklin's Gulls *Larus pipixcan*, Canada, spring 1971 (Alan Kitson)

black highly variable (typical variations shown in figs. 22E and 22F): some may have more black, little different from second-winter. When perched, black on

wing-tip surrounded by white. TAIL As second-winter. BARE PARTS Bill red, usually with dark subterminal marks or thin band. Gape scarlet. Legs red.



93. Adult winter Franklin's Gull *Larus pipixcan* (left) with first-winter Black-headed Gull *L. ridibundus*, Hampshire, March 1970 (J. B. & S. Bottomley)



94. Adult winter Franklin's Gulls *Larus pipixcan*, Chile, February 1970 (Jean Terschuren)

Adult winter/third-winter (fig. 22F) Acquired by complete moult, July to October.

As second-winter except wing pattern as adult summer.

(To be continued)

P. J. Grant, 14 Heathfield Road, Ashford, Kent TN24 8QD

Mystery photographs

28 Slender, pointed wings, neat, black cap and forked tail clearly indicate an adult tern. The grey underparts, separated from the cap by a white streak, may initially suggest Whiskered Tern *Chlidonias hybridus*, but the underparts are too pale for a summer adult and too uniform for one in transitional plumage; most obviously, however, the tail is much too long, too white and too deeply forked. The bill, wing shape and lengthy, flexible outer tail feathers point to a *Sterna* tern and the choice can quickly be reduced to Common S.



hirundo, Arctic *S. paradisaea* or Roseate *S. dougallii*. The greyness, even allowing for shadow, does not support Roseate, which, in any case, will usually have a bill either much blacker throughout or with a greater contrast between black distal half and bright scarlet base. Just discernible, too, is the dark trailing edge beneath the outer primaries, which rules out Roseate.

The underwing pattern as glimpsed here, however, gives little help in separating Common from Arctic. The white streak beneath the black cap is frequently cited as a good feature of Arctic, but this often proves unreliable, as in this case; the bird is an adult Common Tern in breeding plumage. Structure differs slightly, as Arctic has a rounder, smaller head and an even shorter neck, but this must be interpreted with care. This bird has a rather rounded crown, but the forehead slopes into a long bill on which a black tip is just visible. The bill of Arctic is slightly, but noticeably, shorter. A view like this, however, need not result in the too-frequent, unnecessary entry of 'Common/Arctic' or 'Commic' in field notebooks, since one feature makes it possible for identification to be almost instantaneous: the pattern of the upperwing. The six outer primaries have whitish shafts, creating a light flash along the fore-edge, merging into darker tips; their darker inner webs become progressively more obvious inwards, extending forwards as a dusky wedge until abruptly terminated by the cleaner, paler, white-tipped inner four. This contrast, which summer adult Arctic Terns totally lack, is clearly shown here and can, in many circumstances, make the identification of adult Common Terns a simple, very rapid process (see *Brit. Birds* 67: 133-136). The feature intensifies towards autumn and is often visible at long range. Nevertheless, as with any other bird, an inadequate view—against the light or at too great a distance—can still leave a Common/Arctic Tern specifically unidentifiable.

The Common Tern in plate 40, reproduced here at reduced size, was photographed by the late R. P. Bagnall-Oakeley. R. A. HUME

95. Mystery photograph 29. Identify the species. Answer next month



Notes

Little Grebe up-ending and foot-paddling On 15th April 1977, at Corsham Lake, Wiltshire, I watched a Little Grebe *Tachybaptus ruficollis* feeding in pools and channels formed when the lake was partly drained. In the deeper pools it fed in the usual way, diving freely, but near the edges and shallow pools it frequently up-ended in the manner of a Mallard *Anas platyrhynchos*, but with just its tail protruding from the water. On two occasions when the grebe was swimming along a channel 5-20 cm deep, it stopped and made vigorous paddling movements similar to those described by Bernard King (*Brit. Birds* 67: 43) for Pied-billed Grebe *Podilymbus podiceps*; after foot-paddling, it picked items out of the water and swallowed them. Eventually, the grebe joined the main water area of the lake by crossing 2 m of mud on its belly, pushing with its feet; on entering the water, it began feeding normally.

JULIAN C. ROLLS

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Cetti's Warbler displaying in open On 21st May 1974, at La Albufera, Mallorca, I saw two Cetti's Warblers *Cettia cetti* displaying in the open. They were standing face to face on a tarmac road, about 15 cm apart. They appeared to take it in turns to wave alternate wings at each other in a slow, hesitant 'windmill' fashion, while slowly circling around each other, maintaining their distance. So far as I could tell, both were silent during this display. After four minutes of wing-waving, they were disturbed by a lorry and did not return.

D. J. MANNS

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W. G. Harvey has commented as follows: 'Although rarely observed, this display, which is reminiscent of that of the Dunnock *Prunella modularis*, has been recorded several times in east Kent. It is usually seen in May, in the early morning, and is thought to involve the breeding pair and not rival males. I have recorded Grasshopper Warblers *Locustella naevia* performing a very similar display in the open, when they allow exceptionally close approach. The more common prenuptial display of Cetti's Warbler was described in my recent paper (*Brit. Birds* 70: 89-96).' Eds

Continuous nocturnal singing by Cetti's Warbler In W. G. Harvey's paper on Cetti's Warblers *Cettia cetti* in east Kent (*Brit. Birds* 70: 89-96), I was surprised to read that C. Bignal's observation during early May 1976 appears to be the first recorded instance of night singing by the species: I had assumed that this was not an unknown habit. On 25th May 1971, David Tombs and I made tape recordings in mono and stereo of one singing at Minsmere, Suffolk. (An extract of the stereo recording

is in the BBC Sound Archives: disc number MP25361, side 2, band 1. Copies may be consulted in the complete sets of BBC wildlife discs deposited with the BTO, with the British Institute of Recorded Sound, London, and with the Sub-department of Animal Behaviour at Madingley, Cambridge.) This particular Cetti's Warbler was present at Minsmere from March to June, apparently unmated. It was singing when we arrived there at 23.15 GMT, and was still singing continuously when we left at 01.00 hours on 26th. Unlike all Cetti's Warblers which I have heard singing by day in France, it sang, so far as we could tell in the complete darkness, from more or less the same position, apparently moving about little. Its song phrases were often preceded by a sharp 'tic'; and sometimes only this note was uttered, with no following song phrase. The song phrases themselves averaged two seconds in duration; they occurred at intervals varying from four to 27 seconds, an average of almost 13 seconds. An analysis of the extract on BBC disc MP25361 showed that this individual uttered 32 songs within six minutes 53 seconds.

On 24th May 1977, at Surlingham, Norfolk, Richard Margoschis recorded a Cetti's Warbler singing in rather similar fashion at dusk (21.00 GMT). I compared his tape with that of the Minsmere Cetti's. It sang virtually continuously throughout the two minutes 50 seconds of the tape, uttering 32 songs varying in duration from $1\frac{1}{2}$ to four seconds. Mr Margoschis told me that this was one of two Cetti's Warblers—possibly a pair—seen in thick scrub beside a small broad. He first heard it at about 18.30 hours, when for 'well over two hours it sang in typical fashion, one phrase at a time, with several minutes between song phrases, and each was delivered from a different post.' He was about to leave at dusk when it started the prolonged song described above. It continued for about five minutes and almost always from the same song post. In this recording, a second individual, probably a female, can be heard uttering the 'huit', and this may be responsible for the evident great excitement of the singing male.

Mr Margoschis's observations correspond closely with mine; both suggest that Cetti's Warbler sings a continuous song from a more or less fixed song post at night, in marked contrast to its daytime behaviour.

JOHN F. BURTON

*c/o BBC Natural History Unit, Broadcasting House, Whiteladies Road,
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From 00.45 to 02.30 GMT on 10th May 1976, at Elmstone, Kent, I listened to a Cetti's Warbler singing. I was impressed by the frequency and regularity of the song: an initial incisive 'pwit', a $\frac{1}{2}$ -second pause, then 'pitchewitchewit', this sequence repeated eight to ten times per minute, although on a few occasions only the initial note was given and the gap between songs was nearer ten seconds. During the day, the song was normally longer, usually with several minutes between successive songs.

A. C. B. HENDERSON

Elmstone Court, Wingham, Canterbury, Kent

Head-scratching by lame Rook Crows (Corvidae) usually head-scratch by bringing the foot over the lowered wing (indirect head-scratching). On 14th February 1978, at Keele, Staffordshire, I noticed, among a small flock of Rooks *Corvus frugilegus* foraging on pasture, one with a bad limp. The 'trouser' feathers were either missing or matted to the thigh on the left leg. I watched it for about ten minutes through a 25-60 × 60 telescope at 75 m in bright sunlight. After foraging for two minutes, the Rook began to rest, sitting low in the normal position. During the next eight minutes, it scratched its head three times by reaching below its folded wing (direct head-scratching). On each occasion, it raised itself up to stand; slowly extended its left wing a little and slowly raised it; leaned somewhat to the right; very slowly raised its left leg and moved its foot directly to its head; scratched vigorously; and then slowly lowered its foot. There was no noticeable difference in the speed of scratching from that of a normal Rook. It would seem likely that the bird was unable to raise its injured leg over its wing, and the slowness of its movements suggest that it had some difficulty balancing. Apart from its limp, the Rook appeared in good condition.

D. Goodwin (1976, *Crows of the World*, p. 26) cited records of direct head-scratching by Raven *C. corax*, White-necked Raven *C. albicollis* and Carrion Crow *C. corone*; and Dr K. E. L. Simmons reported brief direct head-scratching by a Rook in flight (*Brit. Birds* 67: 243). E. H. Burt and J. P. Hailman, in a paper on head-scratching among North American wood-warblers (Parulidae) (*Ibis* 120: 153-170), considered that rings sometimes interfered with normal indirect scratching, and in cases led to direct scratching. They also found, experimentally, that individuals of at least some species can adapt to scratch by an abnormal method when their normal one is prevented. They also speculated whether injury to wing or leg might change head-scratching methods, citing Dr Simmons's record of an injured Melodious Laughing Thrush *Garrulax canorus* (*Ibis* 103a: 37-49). Direct head-scratching by 'normal' Rooks is usually described as brief or an isolated occurrence. From the repeated direct scratching of the injured Rook at Keele, it would appear that this species can, when necessary, alter what Dr Simmons referred to as a seemingly 'fixed, species-characteristic behaviour pattern'. R. K. WAITE

Department of Psychology, University of Keele, Staffordshire ST5 5BG

Dr K. E. L. Simmons, who has recently reviewed the whole subject of head-scratching (*Avic. Mag.* 80: 143-146), has commented: 'I would consider Mr Waite's observation as one of unco-ordinated indirect scratching by a lame bird, especially since the Rook did in fact extend its wing a little (see my comments on "induced" direct scratching in trapped birds when paper was stuck to their heads: *Ibis* 103a: 37-49).' Eds

Bird predators at Starling roost Previous notes have described predators hunting at roosts of Starlings *Sturnus vulgaris* (*Brit. Birds* 61:

134, 526-528). From September to December 1976, I observed Starlings at a roost near Stranraer, Galloway. The roost, which probably contained over 30,000 Starlings, was in a small, mixed conifer plantation of a fairly uniform height of about 5 m, in low-lying agricultural land 15-20 m above sea level. (The Starlings moved to a new roost about 1.6 km to the northeast on 23rd December.)

Sparrowhawks *Accipiter nisus* were the most persistent and habitual predators at the roost: of 60 attempts to catch prey, by chasing and striking with their talons, 54 (90%) were unsuccessful, two were successful and the final outcome of four was doubtful. Sparrowhawks were present in the plantation half an hour or so before the Starlings arrived. Up to three were seen at times, and their hunting methods varied. Usually, they hid in the trees until the Starlings began weaving to and fro overhead; then they rose to attack, vigorously flapping their wings to gain height, which caused the Starlings to start spectacular, complex aerial evolutions. Once the hawks had manoeuvred themselves into the flocks, they would dive, swoop and glide among the Starlings, which caused further aerial movements and sometimes divided the flocks, which ranged widely. On many occasions, the predators completely disappeared in a mass of circling birds, but they could usually be picked out where the evolutions were more intense. Once, when the Starlings began to enter the roost in a spiral, two Sparrowhawks were lost to view among them and all disappeared into the roosting plantation. All the attacks, however, did not prevent the Starlings from landing, even as the hawks pursued them among the trees.

Peregrines *Falco peregrinus* were seen three times, usually briefly, with two together on one occasion. When a Peregrine stooped, it caused the Starlings to perform high-intensity aerial evolutions, ranging widely. On one occasion, two Merlins *F. columbarius* were seen chasing Starlings, apparently unsuccessfully. Hen Harriers *Circus cyaneus* sometimes flew across the roost, but were not seen to hunt there; nor were Kestrels *F. tinnunculus*, although the Starlings reacted to them.

E. Simms (1975, *Birds of Town and Suburb*) recorded three Sparrowhawks and a Peregrine roosting among Starlings in Warwickshire, but I did not observe this behaviour at the Stranraer roost. The raptors normally flew away at dusk, the Sparrowhawks roosting at a nearby plantation or coastal marsh.

During my observations, the Starlings evidently reacted strongly to the presence of a predator and initially were reluctant to settle. On the only two occasions when predators were absent, they landed immediately. The evolutions are sometimes a feature of communal behaviour at the roost by Starlings, and various reasons have been put forward to explain their function (e.g. Wynne-Edwards, 1962, *Animal Dispersion in Relation to Social Behaviour*; Brodie, 1976, *Brit. Birds* 69: 51-60). The evidently low success rate of predators at the Stranraer roost seems to suggest that these mass evolutions also act as an effective anti-predator reaction.

R. C. DICKSON

Seabhag, Stoneykirk, near Stranraer, Galloway

Starling eating feather At 12.45 GMT on 4th December 1977, in my garden at Brentry, Bristol, I saw a Starling *Sturnus vulgaris* walking towards a bird-bath on the lawn and carrying a feather 6-7 cm long, which it held transversely in its bill. It entered the bird-bath and at once immersed the feather in the water; it then swallowed it, vane first. Grebes (Podicipedidae) habitually eat feathers, but I have not met this behaviour outside this family.

A. P. RADFORD

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This observation is of interest not only because the Starling ate the feather, but also because it dunked it first. A letter on the latter subject appears on pages 189-190. Eds

Fifty years ago . . .

'REPORT ON THE "BRITISH BIRDS" CENSUS OF HERONRIES, 1928. By E. M. Nicholson. Editor's note—When Mr Nicholson suggested that *British Birds* should organise a census of British heronries in England, Wales and, if possible, Scotland, I agreed to do so provided he would not only assist in obtaining the census, but would undertake the great labour of collating the results and preparing the Report.' (*Brit. Birds* 22: 270, April 1929)

Reviews

British Tits. By Christopher Perrins. Collins, London, 1979. 304 pages; 16 black-and-white plates; 93 maps and figures. £6.50.

Tits, Wytham Wood, the Edward Grey Institute and its director Dr Christopher Perrins are inseparably linked. Dr Perrins has been involved with tits ever since his own DPhil thesis; a series of other researchers at the EGI, working under the direction of the late Dr David Lack and more recently of Dr Perrins, have continued the studies on which much of this book is based. It is a masterly summary of what is known, what is suspected and what needs investigating. A really first-rate book of this sort—one to match that other classic 'New Naturalist', *Finches* (1972) by Dr Ian Newton—can be written only by someone intimately involved with the relevant research who also has a deep affection for the animals he is studying and writing about. Dr Perrins's 'Author's preface' ends by recording 'a great debt of gratitude to the birds themselves for the determined and imperturbable way in which they accept our presence and get on with their daily lives despite our interference.' I know of no-one other than Dr Perrins who could have written this book; and few other authors in the world who could have written a comparable one on an equivalent small group of birds. This is a volume to absorb and treasure; there is more 'meat' within *British Tits* than in half a dozen volumes of run-of-the-mill bird-books.

After individual chapters dealing with each of Britain's seven tits (the Long-tailed Tit is included as well as the six *Parus* species), there are chapters on 'Ecological differences between species', 'Home ranges, territories and communication', 'Food requirements, feeding rates and weights', 'Feeding habits and irruptions', 'Breeding biology', 'The breeding season and moult', 'Clutch-size and reproductive rates', 'Growing up and growing old', 'Population studies' and 'Of prey and predators'. It is these final ten chapters which contain the bulk of the summaries and thought-provoking discussion. Inevitably, compression of the enormous amount of information now known about tits leads occasionally to simplifications, but nowhere else can one find available a summary of what is known and the directions that research is taking. The list of 430 references will enable anyone requiring further detail to acquire it.

Collins and Dr Perrins would have given us good value if this book had been twice the price.

J. T. R. SHARROCK

A Field Guide to the Seabirds of Britain and the World. By **Gerald S. Tuck, illustrated by Hermann Heinzel.** Collins, London, 1978. xxviii + 292 pages; 48 colour plates; many drawings, including 24 full page; world distribution maps for 289 species and British and Irish distribution maps for 24 species. £5.25.

The implicit aim of this sturdily bound but otherwise typical example of a modern field guide is that it should become the natural and worthy successor to W. B. Alexander's *Birds of the Ocean* (1928). That pioneer among all such guides has held sway as the seafarer's and seawatcher's ornithological *vade mecum* for half a century, so that the aim is quite an ambitious one. To what extent does it look like being fulfilled?

On the whole, the prospects are favourable. The new guide has many admirable features. The strength of its binding should withstand constant handling even in the dirty weather that so often attends seabird observations. If a replacement is eventually needed (and, for reasons referred to below, one hopes that like its predecessor it will run to many editions), the price is reasonable and a refreshing departure from the irritating £X.95 formula. Most important of all, the cross-referencing between the three main sections—descriptions, illustrations and distribution maps—which occupy over 80% of the book, is a vast improvement on its predecessor's. Clinching the identification of a bird one has seen or is still watching should often be a matter of seconds rather than minutes. Bonus points can be awarded to the succinct accounts contributed by Dr C. J. O. Harrison on the nesting habits of each family; the 25-page supplement in which J. L. F. Parslow reviews in some detail seabird status in the British Isles (a pity, though, that the single Irish example shown in the map of outstanding sites, Cape Clear, has been allowed to wander off course to Dursey Head!); and the introductory section which distils the wide-ranging and very practical experience the author has acquired in his leading role in the Royal Naval Bird Watching Society since its inception in 1946.

One may, on the other hand, shed a tear for the exclusion once again of the divers, grebes and sea-ducks (W. B. Alexander rightly lamented this, blaming lack of space; Captain Tuck bravely—but not altogether successfully—defends it, the fact being, of course, that many members of such families as the pelicans, cormorants, terns and skimmers have much less to do with the sea than a diver or eider). A more serious criticism, however, is that there are too many signs of inadequate final checking. For example, the Preface refers to descriptions of principal ocean routes and their birds and to examples of note-keeping and methods of recording: neither are to be found in the text. Captions of some drawings have been lost or garbled (e.g. pages 82 and 124). Identification points made in text, drawing and plate have not always been collated (as with the notoriously difficult diving petrels). An important seabird centre like Rodrigues is missing from the maps and there is no reference to the British maps in the index. An erroneous reference to 'higher' instead of 'lower' latitudes clashes with the fact, mentioned elsewhere, that the snow-white form of the Southern Giant Petrel quite often wanders north to the sub-tropical convergence. And so on.

Such blemishes—mostly trivial and easily correctable—do not, however, detract from the value of this guide to the extent of suggesting that it would be better to await a revised edition. The book is already a 'must' for all seawatchers and, even where the artist seems a bit 'at sea' with his subject matter (the *Eudyptes* penguins and the auks, for instance, as compared with the cormorants and the gulls), the diagnostic points are almost always brought out by both artist and author with skill and clarity.

HUGH ELLIOTT

Letters

Birds dunking food There are many references in the literature to birds washing food; they cover about six families and almost all are for water birds. Although termed 'food washing', the behaviour described may

fulfil several functions. During the last few years, I have observed this behaviour by injured juvenile Grey Herons *Ardea cinerea* in my care. Food items were often picked up and purposefully placed in the water bowl, shaken and swallowed. I always interpreted this as food lubrication to facilitate swallowing, a view further substantiated by the fact that 'washing' is most prevalent with food with a dry surface, such as day-old chicks. Soaked food placed in a dish was usually swallowed directly. I have also observed a tame juvenile Carrion Crow *Corvus corone*, which was at complete liberty, dunking food. It tried to hammer off with its beak swallowable pieces of a very hard, dry piece of bread. After a few relatively unsuccessful attempts, the crow carried the bread to a water dish and soaked it for two or three seconds before further, more successful attempts. James Kirkwood has told me (verbally) of a Raven *C. corax* that he watched at Rhandirmwyn, Dyfed, feeding its well developed young on carrion; before flying to the nest, it would alight at a nearby stream and, although JK was too far away for positive observation, the Raven seemed to soak or wash the food before feeding it to its young. D. Goodwin (1976, *Crows of the World*) also referred to crows dunking food.

CARL G. JONES

Montclare, St Clears, Dyfed SA33 4NY

A note and a request on this subject appear on pages 188 and 192. Eds

Little Gulls in a Black-headed Gull colony In their recent review of Little Gulls *Larus minutus* in Britain and Ireland (*Brit. Birds* 71: 563-582, table 2), C. D. Hutchinson and Brian Neath tabulated occurrences of this gull in colonies of Kittiwakes *Rissa tridactyla* and Black-headed Gulls *L. ridibundus*. Three records should be added to their list: single immature Little Gulls among the Black-headed Gulls which breed on the South Yorkshire portion of Thorne Moors, on 8th June 1969, 6th and 7th June 1970 and 20th May 1972.

MARTIN LIMBERT

23 Brockenhurst Road, Hatfield, Doncaster DN7 6SH

Citrine Wagtail in Cyprus Tim Inskipp's letter (*Brit. Birds* 72: 44) on west Palearctic records of Citrine Wagtail *Motacilla citreola* omitted a recent record from Cyprus. An adult male was seen at Akrotiri Salt Lake on 23rd May 1971 (*Cyprus Ornithological Society (founded 1970) Second Bird Report*).

PETER FLINT

29 Tilney Close, Alton, Hampshire GU34 2BG

Reed and Marsh Warbler identification We read with interest the series 'Mystery photographs', but were disappointed to see D. I. M. Wallace miss the opportunity of stressing the best field characters separating Reed *Acrocephalus scirpaceus* and Marsh Warblers *A. palustris* (*Brit. Birds* 71: 122).

There is no doubt that song is the best distinguishing character. Reed Warblers occasionally imitate other species, but such imitations occupy only a small part of their vocalisations. The few highly mimetic Reed Warblers that one of us (FD-L) has studied were not hybrids, but uttered a mixed Reed-Marsh Warbler song, having clearly had their sibling's song imprinted on them. Even these mixed songs, however, retain sequences of typical, stereotyped Reed Warbler song. The song of Blyth's Reed Warbler *A. dumetorum*, incidentally, although containing imitations, is discontinuous and more slowly delivered and repetitive than that of Marsh Warbler (see note by Jeffery Boswall, *Brit. Birds* 61: 34-35). It is very different from Marsh, and not merely 'finer'.

There was also, however, no mention of the very distinctive differences in forehead profile. Reed has a longer, finer bill, and a sloping forehead; Marsh has a shorter, stouter bill, and a steep forehead, which recalls a *Hippolais* warbler at times. Although DIMW noted that Reed looks distinctly warmer in colour, he did not mention that it also has a white throat, which contrasts diagnostically with its brown upperparts. Another good character is the contrasting rusty rump of western Reed Warblers. In our experience, these points are reliable in the field throughout the year.

In view of the confusing individuals reported in England in the 1960s (*Brit. Birds* 58: 181-188, 473-478), it will be of interest that one of us, in Belgian studies (Françoise Lemaire 1977, *Behaviour* 63: 215-240), recorded hybridisation between Reed and Marsh Warblers, as well as mixed song and interspecific competition.

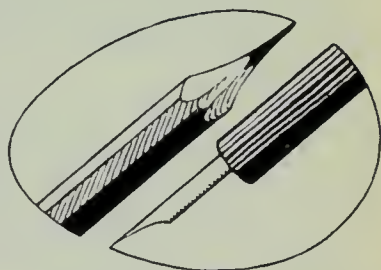
FRANÇOISE DOWSETT-LEMAIRE and R. J. DOWSETT
Livingstone Museum, PO Box 498, Livingstone, Zambia

Announcements

'Bird Illustrator of the Year' and 'The Richard Richardson Award' The closing date for entries for these competitions is 31st May 1979. Artists are invited to submit four line-drawings: full details were given in the January issue (*Brit. Birds* 72: 45-46), which should be carefully consulted for the rules and the address to which drawings should be sent.

The judges will be Dr Eric Ennion, Robert Gillmor, D. I. M. Wallace and Dr J. T. R. Sharrock.

The winner of the title 'Bird Illustrator of the Year' will receive £75 and an inscribed salver; the two runners-up will receive £40 and £25. A special award (value £50)—'The Richard Richardson Award', named in memory of the late Richard Richardson—will be presented for the best entry submitted by an artist aged under 21. The prizes will be presented



at a press reception in London, where a selection of the drawings will be displayed.

Paleartic bird sound recordings The series of discographies which have in the past appeared in *British Birds* (57: special supplement; 59: 27-37; 62: 49-65, 271-281; 63: 324-332; 64: 431-434; 66: 303-310; 70: 530-539) is continued in the October 1978 issue (no. 72) of *Recorded Sound*. In future, new bird sound recordings will be briefly reviewed individually in *British Birds* if they are readily available in Britain and Ireland and add significantly to the range of those which will be summarised in a special feature by Ron Kettle in next month's issue of *British Birds*.

Requests

Survey of food washing and dunking by birds There are scattered records of birds of many orders dipping food into water. The functions probably extend beyond the role of food washing, and dunking to moisten, lubricate and soften the food may be a main purpose; play could be another. The habit is almost certainly more widespread among birds than is generally realised. Anyone who has observed food washing or dunking is invited to send details, including the nature of the food being washed, their interpretation of the behaviour and any other relevant details or comments, to Carl G. Jones, Montclare, St Clears, Dyfed SA33 4NY.

Photographs of birds in winter We shall be publishing a small selection of photographs of birds in typical winter scenes in a forthcoming issue. Any black-and-white prints obtained during the 1978/79 winter will be especially welcomed for possible inclusion. Please send them to the editorial address: Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

Bitterns in winter 1978/79 To assemble a report on the effects of the cold winter on Bitterns *Botaurus stellaris*, the following information is needed concerning the period November 1978 to March 1979:

Occurrences of Bitterns dead or alive outside breeding sites, including dates, numbers, etc.

Habitats (was open water available?) and behaviour (feeding, tameness, etc.).

Records of dead birds with as many biometric data as possible: weight and lengths of wing (maximum chord), bill to feathers, tarsus, tail and longest toe; also age if possible (see *BWP*), but this may not be easy to decide.

Records received so far have been widely scattered in England and Wales, and have included several dead and very thin specimens and numerous observations in unusual places. Some may have been Continental immigrants, but the very small British population (probably less than 40 pairs) may well have suffered a further setback. Changes in breeding numbers will be investigated this summer.

A report on the findings will be published as soon as possible. All records, which will be gratefully acknowledged, should be sent to Colin J. Bibby and John C. U.-Day, RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

Photographs of Short-billed Dowitcher The Rarities Committee is currently carrying out further research into the evergreen problem of the identification of dowitchers *Limnodromus*. To help with this—and for possible use in an identification review in this journal—good photographs of juvenile and first-winter or adult winter Short-billed Dowitchers *L. griseus* would be welcome. All prints will be acknowledged, and returned after use. They should be sent to P. J. Grant, 14 Heathfield Road, Ashford, Kent TN24

8QD or to the *British Birds* editorial office at Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

Colour-ringed Choughs In 1978, Bardsey Bird Observatory ringed 31 Choughs *Pyrhcorax pyrrhcorax*, and put two colour rings on the left leg of each. Birdwatchers visiting north Wales are asked to report full details of any sightings to P. J. Roberts, Bardsey Bird Observatory, via Aberdaron, Pwllheli, Gwynedd LL53 8DE.

News and comment

Peter Conder and Mike Everett

Sullom Voe disaster The *Esso Bernicia* was only the twelfth tanker to berth at the Sullom Voe oil terminal, but she has already gained a notoriety matching that of the *Torrey Canyon*. A berthing accident resulted in a spillage of some 1,100 tons of oil in the terminal harbour during late December; floating booms failed to contain the oil and, in the weeks which followed, it spread up the western side of Yell to Unst, spread right through Yell Sound, began to come ashore on Mainland and reached Whalsay. It virtually annihilated the winter waterfowl in Sullom Voe itself and, as the weeks went by, it became clear that enormous numbers of birds were dying in Shetland waters. We hesitate to think what the running total will have reached by the time you read this, but at 31st January the known bird deaths amounted to 2,869 individuals of 52 species. These included 112 Great Northern Divers *Gavia immer* (between one-quarter and half of the Shetland winter population), 527 Black Guillemots *Cephus grylle* (perhaps one-sixth of the Shetland population), 254 Long-tailed Ducks *Clangula hyemalis* (about one-eighth of the Shetland winter population), 458 Shags *Phalacrocorax aristotelis*, 423 Eiders *Somateria mollissima* and 250 Guillemots *Uria aalge*. Among the other casualties were a White-billed Diver *Gavia adamsii*, a Short-eared Owl *Asio flammeus* and a Snow Bunting *Plectrophenax nivalis*. At least 20 otters *Lutra lutra* died too, and the effects of the oil along the shore reached beyond the marine and littoral wildlife to contaminate literally hundreds of sheep; indeed, phoning in a report on the kill figures, Pete Kinnear mentioned that one crofter estimated that 90% of his animals had been contaminated. At the time of writing, it is too early to assess the full impact of this massive kill, and too soon to

say much about how and why it happened' but, when all the facts are known, we shall return to this dismal story. For the moment, we can say it has been a disaster, and that it does not bode well for the future of Shetland and its birds if it is a foretaste of the things to come.

The end of 'Christos Bitas' If the Sullom Voe incident received relatively little publicity outside Scotland, the same cannot be said of the *Christos Bitas* which went aground on The Smalls off Pembrokeshire, discharged enough oil to kill some 2,000 seabirds—including 200 Gannets *Sula bassana*, 1,200 Guillemots and 500 Razorbills *Alca torda*—and provided us with a media saga which went on, and on, and on, and culminated in the Powers That Be indulging in a small orgy of self-congratulation for having dealt with the whole affair so splendidly. Whether they really deserve their own plaudits—or indeed anyone else's—is a matter of opinion, but there is no doubt that the decision to sink the ship, together with some 1,000 tons of crude oil which it still contained, 800 km west of Ireland shocked many naturalists; the shock became even greater when in fact the last resting place of the ship turned out to be less than 500 km out. We know very little about the bird populations that distance west of Ireland . . . neither do the 'experts' who took the remarkable decision that this was a safe area in which to sink the ship and risk its remaining oil discharging into the Atlantic. The reader can make up his own mind as to whether or not this was a responsible way of killing off an embarrassing problem.

Steller's Sea Eagle Little information exists in the literature on the population

of the vast and almost legendary Steller's Sea Eagle *Haliaeetus pelagicus*, so it is worth mentioning a long-term study carried out on the almost equally legendary Kamchatka Peninsula by E. G. Lobkow. Writing in *Zoologicheskoy Zhurnal* LVII (1978), he estimated that 480-520 pairs were present during his study years (1971-77).

Wildfowling ban imposed Hopefully, somebody will eventually write up the 'big freeze' of January 1979 and document all the extraordinary bird movements it brought about, including a virtual invasion of Smews *Mergus albellus* and widespread occurrences of Bean Geese *Anser fabalis*. One effect of the hard weather—still obvious in early February—was the freezing of inland waters and marshes over much of Britain, leading to a mass exodus of wildfowl to the coast, large influxes from the Continent and a gradual southwards and westwards movement by many birds—culminating, apparently, in large numbers leaving Britain altogether. All through the period, there was ample evidence of waterfowl and waders facing extreme hardship and starvation in many areas. On the Continent, the wildfowling season in West Germany ended just in time to ease pressures on the birds, and, at the same time, bans on wildfowling were imposed in Denmark, the Netherlands, Belgium and parts of France. The RSPB took the lead in seeking a similar ban in Britain, and on 26th January the Secretary of State for the Environment signed an Order under Section 7 of the Protection of Birds Act, 1967, banning the shooting of all waders and wildfowl listed in the Third Schedule of the Act. The Secretary of State for Scotland followed suit a few days later. In some areas, responsible wildfowlers had already initiated voluntary bans. Unfortunately, in England and Wales at least, the Order received very little publicity and was only partially effective over the last weekend of the shooting season above high water mark; but a cessation of shooting did come about and this must have helped birds in many areas where the going was particularly hard for them. These Orders, which ran over into the February period of shooting below high water, were the first of their kind.

Maxima mea culpa The junior author must take responsibility for an error in this

feature in the January issue (72: 47); as many people have pointed out, Curlews *Numenius arquata* do nest on RSPB reserves: the absentee should have been Stone-curlew *Burhinus oedipnemus*, which was indeed named correctly later in the note. Incidentally, since 'Opinions expressed in this feature are not necessarily those of the editors of *British Birds*', perhaps the said writer can express one of his own and say that he prefers the archaic 'Stone Curlew' to 'Stone-curlew'.

'Irish Birds': essential reading The 1978 issue of *Irish Birds* (volume 1, number 2) is now to hand. The first issue (reviewed in *Brit. Birds* 71: 92) was welcomed; already, this national publication has become a journal of international importance. Few if any readers of *British Birds* would find nothing to interest them, and most would find hours of interesting reading. Not only is there the twenty-fifth Irish Bird Report, covering 1977, but nine major papers, an appreciation of the work of Major R. F. Ruttledge, five short notes, a report on ringing in Ireland in 1977, and a number of reviews. The major papers concern a survey of gulls (Laridae) breeding inland in the west of Ireland in 1977 and 1978 (by A. Whilde), censuses of breeding bird communities of a sand dune system in northeast Ireland (by R. G. W. Nairn and J. A. Whatmough), a fascinating account of Ireland's former premier breeding haunt of aquatic birds (Lough Funshinagh, where hundreds of Black-necked Grebes *Podiceps nigricollis* bred at one time, by G. R. Humphreys), the results of a census of Northern Ireland heronries (*Ardea cinerea*) in 1977 (by J. H. Wells), observations with radar of bird migration across the northern Irish Sea in the late autumn of 1959, linking these radar observations from northeast Ireland with massive visible migration noted at Cape Clear Island in southwest Ireland (by Dr W. R. P. Bourne), documentation of the effects of oil pollution on seabirds on Irish coasts (by Ciaran O'Keeffe), an account of the birds of Inishbofin and Inishshark, Co. Galway (by C. D. Hutchinson and Major R. F. Ruttledge), and reports on the breeding in Ireland of Goosanders *Mergus merganser* (by J. Ralph Sheppard) and of Red-necked Phalaropes *Phalaropus lobatus* (by Major R. F. Ruttledge). Short notes also include details of

the breeding by Ruddy Ducks *Oxyura jamaicensis* at Lough Neagh, Co. Antrim (by R. W. Culbert and J. S. Furphy) and the discovery by J. Cassidy of breeding Greenshanks *Tringa nebularia* in Co. Mayo in 1971.

At £1.75 (plus 25p postage), the 292-page second number of *Irish Birds* is terrific value for money. It is obtainable from W. J. O'Flynn, Ballintubbrid, Carrigtwohill, Co. Cork. (Contributed by JTRS)

The ultimate grebe? Writing short, concise captions can be a nightmare, and can also produce amusing results. We particularly liked one beneath a picture of a Pied-billed Grebe *Podilymbus podiceps* in the latest issue of *Scottish Birds* (10: plate 14b) which ended '... note foolproof bill'.

'Save a Swan' Those of you who put your trust in 'Swan Vestas' matches will notice a new feature this year: some 72 million matchboxes will contain tear-off tabs which, when returned to Bryant & May, will be worth 1p each towards the Wildfowl Trust's 'Save a Swan' appeal, which aims to raise £10,000 towards the conservation of Bewick's Swans *Cygnus columbianus*. A specially commissioned print of a painting by Keith Shackleton, 'Bewick's Swans through the Baltic' (see plate 96), is also available, price £1.75, from which Bryant & May will present 25p per print sold towards the appeal. Further details

may be obtained from Denis Beresford of Burson-Marsteller Ltd, 25 North Row, London W1R 2BY.

Aegean falcons A substantial part of *Nature* (15), the journal of the Hellenic Society for the Protection of Nature, is devoted to the status of Eleonora's Falcon *Falco eleonora* in Greece and its conservation; one of the major threats for the near future is tourism. A paper by Hartmut Walker shows that the breeding population in the Aegean is probably about 65% of that known for the whole of this species' limited range: his mean figures indicate 2,860 pairs out of a total of 4,400. Actually, the precise size of the Aegean population is unknown, but it is clearly much larger than many of us thought. A minimum figure of 1,119 pairs is given, and a possible maximum of 4,500. Another interesting fact, discussed at some length by Gilbert Cant, is that substantial numbers of these falcons actually overwinter in the southern Aegean; previously, it was assumed that the whole population was migratory and wintered in Madagascar.

Top scientist skates on thin ice No, not a comment on his professional abilities, but a factual statement concerning Dr James Cadbury, head of the Research Department at the RSPB, who took advantage of January's severe weather to don skates and display his prowess to his

96. 'Bewick's Swans through the Baltic' by Keith Shackleton



colleagues on the frozen goldfish pond outside their office windows.

Can you beat this? A fun spot for the ardent birders, if they have managed to read this far: we wonder if anyone can better this 'incident score' made not long

ago in Morocco. Observers stalking a small party of Houbara Bustards *Chlamydotis undulata* saw an Eagle Owl *Bubo bubo* put up by a passing sheepdog; shortly afterwards, there was a Lammergeier *Gypaetus barbatus* overhead being buzzed by two Lanners *Falco biarmicus*. Any takers?

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

S. C. Madge and K. Allsopp

These are largely unchecked reports, not authenticated records



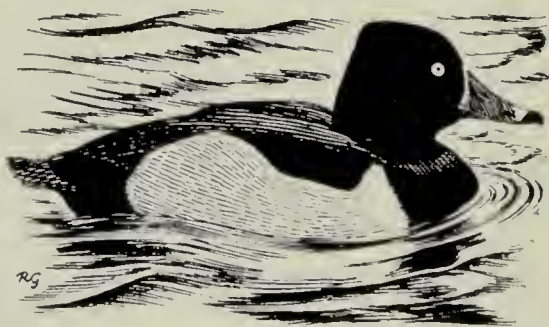
This report covers January; except where otherwise stated, all dates refer to that month.

January will be remembered for the hard weather. The first week was dominated by cold air from the Continent, but then rather milder cyclonic weather and westerlies give a brief respite during 7th-12th. A return to anticyclonic conditions from 14th brought heavy snow, and even colder weather came in from the Atlantic from 23rd, bringing severe snow and very cold temperatures to all parts of the country. Interestingly, however, the Ringing Office reports that recoveries have reached only a normal winter average level, so the effect on birds has in no way been comparable with 1962/63.

Waterfowl

The cold conditions also prevailed on the Continent and waterfowl moved out from many inland waters during the freeze-up. Movements of ducks were noted all along the east coast of England, including 103 **Scaups** *Aythya marila* at Filby (North Yorkshire) on 6th. **Tufted Ducks** *A. fuligula*, **Pochards** *A. ferina* and **Goldeneyes**

Bucephala clangula took refuge in sheltered bays and on rivers and estuaries, and numbers of waterfowl increased in south-west England. **Smews** *Mergus albellus* continued to be reported from many parts of the country where they do not normally occur. There was a party of 17-19 on the River Trent near Newark (Nottinghamshire) on 6th, and in many other places parties of up to six were not infrequent. The number of **Goosanders** *Mergus merganser* on Eccup Reservoir (West Yorkshire) reached an all-time high of 134 on 13th, and totals in many areas were above normal. A drake **Red-crested Pochard** *Netta rufina* appeared at Slapton Ley (Devon) on 29th December and **Ferruginous Ducks** *A. nyroca* at College Reservoir (Cornwall) from 20th and in Pembrokeshire. There were rumours of 'several' **Ring-necked Ducks** *A. collaris*



in Co. Cork and a drake appeared on the River Tamar, off Warleigh Point (Devon) on 20th. Single females (or perhaps the same) were seen at Marazion Marsh and Drift Reservoir (both Cornwall) during the month: the first Cornish records. Another Nearctic duck was a **Black Duck** *Anas rubripes* which spent the afternoon of 20th December on the ice at Fairburn Ings (North Yorkshire), not to be seen again.

There were reports of two **Surf Scoters** *Melanitta perspicillata* in Spey Bay (Morayshire), and others had been found earlier at Clogher Head (Co. Louth) on 19th December and off Bundoran (Co. Donegal) on 1st. A **Velvet Scoter** *M. fusca* appeared inland at Killington Reservoir (Cumbria) on 6th December and another three spent most of January at Covenham Reservoir (Lincolnshire), where they were joined by a **Black-throated Diver** *Gavia arctica* on 20th. Another Black-throat had appeared inland at Pennington Flash (Lancashire) in mid December where one, perhaps the same bird, has now appeared for three successive winters.

Bean Geese *Anser fabalis*, displaced from their Continental wintering grounds, appeared at a number of sites in east and southeast England, with 90 in the Stour Valley and 20 at Dungeness (both Kent); in the north, two were shot from a party of about ten grey geese at Aboyne (Aberdeenshire) on 12th. Also of interest were two **Greylag Geese** *A. anser* at Slains (Aberdeenshire) on 7th, which were considered to be showing characters of the eastern race *rubrirostris*. **White-fronted Geese** *A. albifrons* moved into Cornwall, where over 100 were present at their former winter haunt on the Walmsley Sanctuary, River Camel, on 26th, with 20 at Siblyback Reservoir at the same time. A **Brent Goose** *Branta bernicla* with characters of the Nearctic and Siberian race *nigricans* was discovered at Walton-on-the-Naze (Essex) on 28th, while a few days earlier a **Red-breasted Goose** *B. ruficollis* had been found in Lancashire.

Birds of prey

In addition to the **Rough-legged Buzzards** *Buteo lagopus* mentioned in the December report (*Brit. Birds* 72: 137), a few more records trickled in, with reports from Holkham (two) and Cley (both Norfolk), Bempton (Humberside), Forvie (Aberdeenshire), Bransdale (North Yorkshire), Sandwich Bay and Sheppey (both Kent), Littleborough (Nottinghamshire) and, most surprising of all, at Skibbereen (Co. Cork), the first in Ireland since 1963.

Red Kites *Milvus milvus* also cropped up in a scattering of places: in late December there were singles at Sandwich Bay and Elmstone (both Kent), over Boston Spa (North Yorkshire), between Portsoy and Cullen (Banffshire), and over Siblyback

Reservoir (Cornwall) on 21st; there were also reports from Pembrokeshire. A **Saker** *Falco cherrug* at Ladybower Reservoir (Derbyshire) on 27th could well have had captive origins, but who knows?

Following the influx of **Long-eared** *Asio otus* and **Short-eared Owls** *A. flammeus* in the early winter, it seems clear that they moved out during the cold spell; many perhaps moved south and west, as reflected, for instance, by the count of 16 Short-eared Owls in the vicinity of Dozmary Pool (Cornwall) on 26th.

Seabirds

During a strong easterly gale at Fraserburgh (Aberdeenshire) on 20th, observers braved the cold conditions and produced 44 **Black Guillemots** *Cephus grylle* flying south in half an hour, with 3,000 **Fulmars** *Fulmarus glacialis* in an hour. Meanwhile, at Girdleness (Aberdeenshire) on the same day, eight **Little Auks** *Alle alle*, a **Manx Shearwater** *Puffinus puffinus* and three **Great Skuas** *Stercorarius skua* flew north in two hours. Some interesting reports were received from northeast England in late December: off Filey on 28th, the cream of the day included three **Sooty Shearwaters** *P. griseus*, five **Manx**, seven **Arctic Skuas** *S. parasiticus*, three **Great Skuas** and a **Pomarine Skua** *S. pomarinus*. Another Pomarine Skua appeared in the Humber estuary off Berrow Haven (Humberside) on 3rd and 12th-13th, and an immature skua, either Arctic or Pomarine, was at Draycote Reservoir (Warwickshire) on 2nd-3rd. Another **Ross's Gull** *Rhodostethia rosea* turned up in the northeast, at Cresswell (Northumberland) in mid month, and there were a number of reports of **Iceland** *Larus*

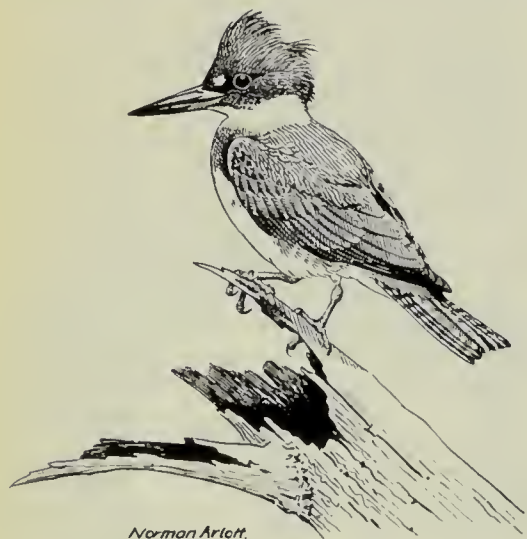


glaucoides and **Glaucous Gulls** *L. hyperboreus* at roosts, rubbish dumps and coastal points in northern England during January; one rubbish tip at York (North Yorkshire) held two Iceland and one Glaucous at the same time early in the month. Two **Ring-billed Gulls** *L. delawarensis* were discovered at Belmullet (Co. Mayo) in early February.

CORRECTION In our September report (*Brit. Birds* 71: 606), we noted that 50 **Leach's Petrels** *Oceanodroma leucorhoa* passed Castlerock (Co. Derry) in an hour on 11th; this was incorrect; the actual locality was Ramore Head (Co. Antrim).

Belted Kingfisher

We had only just heard of a **Belted Kingfisher** *Ceryle alcyon*, discovered in December as it 'belted' up and down the River Moy, near Ballina (Co. Mayo), calling raucously, when the sad news reached us that it had been shot on 3rd or 4th February. This record provides a very interesting sequel to some older ones of this magnificent Nearctic partial migrant. There are two specimens said to have been collected in the autumn of 1845, from Co. Meath and Co. Wicklow, but neither has ever been completely beyond doubt in respect of fraud. Another, however, said to have been shot at Sladesbridge (Cornwall) in November 1908, appears to be genuine; although it has never been officially



accepted (see *Brit. Birds* 48: 8), it is currently under review by the BOU Records Committee, and the 1978/79 Irish occurrence will give added interest to the outcome.

Passerines

Migrant thrushes vanished from many areas as snow and ice covered the ground; many **Redwings** *Turdus iliacus* moved on to Ireland and France (as did **Lapwings** *Vanellus vanellus*), and a **Black-throated Thrush** *T. ruficollis* at Holy Island (Northumberland) on 26th was probably involved in a movement of thrushes into Britain from the frozen Continent. A thin scattering of **Waxwings** *Bombycilla garrulus* was reported from East Anglia and eastern Scotland. A **Cetti's Warbler** *Cettia cetti* reached Pembrokeshire, but the oddest passerine of the winter has been an **Alpine Chough** *Pyrrhocorax graculus* which was reported from St Margaret's Bay (Kent) on Boxing Day: its origins must be rather suspect as it is such a sedentary species. Thirty **Lapland Buntings** *Calciarius lapponicus* were discovered on the South Slob (Co. Wexford) on 17th December, and 12 were seen at Portmarnock (Co. Dublin) over New Year, both good concentrations for Ireland.

Late summer migrants

Chiffchaffs *Phylloscopus collybita* and **Blackcaps** *Sylvia atricapilla* were quite widely reported during December, but many of them must have perished during January. A late drake **Garganey** *Anas querquedula* was at Ruxley (Kent) on 26th December and, on the same day, a **Common Tern** *Sterna hirundo* was seen off Berges Island (West Glamorgan). In Cumbria, a late **Redstart** *Phoenicurus phoenicurus* was still at Coniston on 2nd December and a **Yellow Wagtail** *Motacilla flava* stayed at Walney Island until 9th December. Even more remarkable was a report of a **Hobby** *Falco subbuteo* at Crassbrook (Derbyshire) on 14th December.

Latest news

In early March, the first summer migrants on the English south coast included **Garganey**, **Sand Martin** *Riparia riparia*, **Yellow Wagtail**, **Black Redstart** *Phoenicurus ochruros* and **Wheatear** *Oenanthe oenanthe*. Two potential 'firsts' for the British and Irish list were both in the southeast, both ducks and, regrettably, both perhaps escapes from captivity: an adult male **Barrow's Goldeneye** *Bucephala islandica* at Bewl Bridge Reservoir (Kent/East Sussex) and a female or immature male **White-headed Duck** *Oxyura leucocephala* at Bough Beech Reservoir (Kent).

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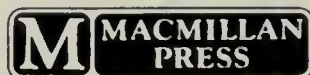
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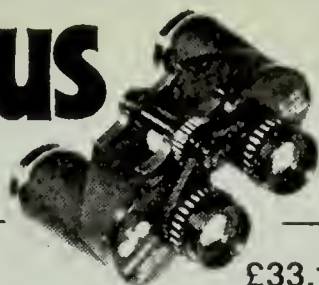
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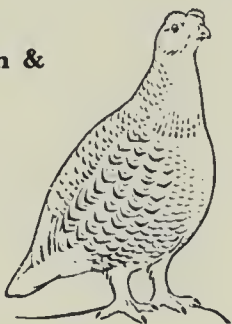
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British Birds publishes material dealing with original observations on the birds of the west Palearctic. Except for records of rarities, papers and notes are normally accepted only on condition that material is not being offered in whole or in part to any other journal. Photographs and sketches are welcomed.

Papers should be typewritten with double spacing and wide margins, and on one side of the sheet only. Authors should carefully consult this issue for style of presentation, especially of references and tables. Vernacular and scientific names and sequence of birds follow **The 'British Birds' List of Birds of the Western Palearctic** (1978); names of plants follow Dony *et al.* (1974, **English Names of Wild Flowers**); names of mammals follow Corbet & Southern (1977, **The Handbook of British Mammals**). Figures should be in Indian ink on good quality tracing paper, drawing paper, non-absorbent board or light blue or very pale grey graph paper; lettering should be inserted lightly in pencil; captions should be typed on a separate sheet.

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British Birds

VOLUME 72 NUMBER 5 MAY 1979



Recommended bird-recordings

Ron Kettle 



A list of bird sound discs and cassettes specially compiled for 'British Birds' by the Curator of the British Library of Wildlife Sounds, with advice and assistance from Jeffery Boswall

Many birdwatchers want to get to know bird sounds better, but are unaware of what discs and cassettes are currently available and where to buy them. We felt, therefore, that it would be helpful to list a selection of these and their sources.

Some of the best sets of records are unfortunately no longer available. One of the most ideal and quite comprehensive sets of discs—the 18 7-inch (17 cm), 33 $\frac{1}{3}$ rpm records 'Listen... the birds', distributed by the RSPB—was withdrawn a couple of years ago, apparently for cost reasons; but, even at £2 a disc, a set would be little more than half the price of the Peterson Field Guide set of LPs, which covers so many more species than required by the average birdwatcher, who wants primarily to have reasonably long stretches of the characteristic sounds of British birds. Only the excellent Shell series, also—and to their credit—33 $\frac{1}{3}$ rpm, now offers

a fairly adequate selection of common bird sounds on convenient 7-inch discs.

An important set for the more serious ornithologist—Victor Lewis's 'Bird Recognition, an Aural Index', nine 7-inch, 45 rpm discs boxed in threes by habitat—has not been available for many years. No other British publication has attempted to give the vocabularies of the species for which there is a real need, although the Peterson discs do to some extent for all European species. It is good news, therefore, that Victor Lewis is planning to publish in 1979 a series of cassettes covering the vocabularies of 125 British birds.

Another excellent comprehensive set of European bird sounds, systematically arranged on 7-inch discs—Roché's sound guide set of 27 records—once readily available in Britain, is now obtainable only direct from France and is relatively more expensive.

On the credit side, a whole range of cassettes of British species has been published during the last five years, and perhaps that is where the future lies. The increasing use of stereo, contrived or genuine, adds little to the usefulness of recordings, but greatly enhances natural atmosphere effect.

There are few good retail sources of bird sound records. The only one handling a worthy selection is the RSPB Sales Department. A few have been obtainable from *Wildlife*, but that magazine has now suspended the sale of records for the time being. We have indicated, in the following list, the discs and cassettes which are available from the RSPB. In general, only the better or larger record shops handle many bird sound records, but others will probably order them on request. (Full addresses of publishers are given when they themselves are the best source.)

The list which follows has been selected on two main criteria: value to the birdwatcher and availability. Nearly all the current British publications are included, together with some specially interesting Continental ones and a few from other parts of the world which can be bought here or are fairly easily obtainable from their place of publication. The difficulty of acquiring some discs, notably those issued in the USSR, has regrettably necessitated their exclusion.

More detailed reviews of many of the discs and cassettes can be found in the running discography of Palearctic bird sound recordings in earlier issues of *British Birds*: to help the reader, the numbers of the relevant entries are shown in parentheses after the titles in the list. The most recent publications are reviewed in the latest instalment of the discography, which appears in *Recorded Sound* (October 1978), the journal of the British Institute of Recorded Sound (BIRS).

The speed of 30-cm discs is not given because they are all 33 $\frac{1}{3}$ rpm. The price, excluding postage, is stated where it is known at the time of going to press (mail order prices from the RSPB are different and are not shown here). An approximate price is shown for some overseas publications.

A copy of all but one or two of the records listed is held in the British Library of Wildlife Sounds (BLOWS) at BIRS, 29 Exhibition Road, London SW7 2AS, and readers are welcome to listen to them there, preferably by appointment with me.

Mainly British publications

Shell Nature Records: British Birds Series. *Lawrence Shove, 1966-69. Eight 17-cm 33 $\frac{1}{3}$ rpm discs, DCL 701-708. Discourses Ltd, 36 Crescent Road, Tunbridge Wells, Kent TN1 2LZ. £1.20 each. (96 & 131)*

Fairly comprehensive set of discs. Each presents about a dozen characteristic species of a particular habitat: Sea birds; Garden and



Park Birds; Woodland Birds; Estuary Birds; Field and Open Countryside Birds; Moor and Heath Birds; Marsh and Riverside Birds; Dawn Chorus and Nightingale *Luscinia megarhynchos*; and Mountain and Highland Birds. Excellent recordings, with brief spoken commentary. Good for the ordinary birdwatcher who wants to get to know the songs, or sounds, of a limited number of species for a small outlay.

Witherby's Sound Guide to British Birds. *Myles North & Eric Simms, 1969 (original edition 1958). Two 30-cm discs, EAS 001/2 and 003/4, and 104-page book, in box. H. F. & G. Witherby Ltd, 5 Plantain Place, Crosby Row, London SE1. £9.50. (132, 33)*

300 characteristic sounds of nearly 200 species in systematic order. Brief needle time. English names announced. Valuable detailed descriptive notes in book.

Woodland and Garden Birds. *Eric Simms, 1971. Double album of two 30-cm discs, REF 235, or two cassettes, HRMC 235. BBC Records and Tapes, available from RSPB and shops, not BBC. £4.95 (discs), £5.75 (cassettes). (140)*

The two records were more usefully available separately. *Woodland Birds* is arranged by month and season through the year. *Garden Birds* is a misleading title, since it includes swans *Cygnus*, sandpipers (*Scolopacidae*), grebes (*Podicipedidae*) and so on, as well as many other kinds of animal: it is really concerned with the wildlife of urban areas. Informative commentary, but needle time per species too short on both. Sleeve notes give recording details.

Highland Birds, Wildlife of East Anglia, Wildlife of Wales, and Sea and Island Birds. *Eric Simms, 1970-71. Separate 30-cm discs, RED 74M, 83M, 96M and 100M. BBC Records and Tapes, available from shops, not BBC. £2.50 each. (140, 146 & 159)*

Sixty or 70 species (nearly all birds) per disc, with interesting introductions; little needle time for each. Sleeve notes give brief recording details. The seabird record seems to have been deleted from the catalogue.

The Peterson Field Guide to the Bird Songs of Britain and Europe. *Sture Palmér & Jeffery Boswall, 1969-73. Fourteen 30-cm electronic stereo discs,*

RFLP 5001-14. Swedish Radio, Stockholm. Distributed in Britain by EMI, available from RSPB and major retailers. £4.75 each. (152 & 164)

By far the most comprehensive set, it includes more than 1,000 recordings of over 530 species, arranged in the same order as *A Field Guide to the Birds of Britain and Europe* (second edition, 1965). The last two discs cover accidentals. Fairly good vocabulary coverage and quite generous needle time for most species. Each bird is announced by scientific name only. Leaflets in English provide clear guide to recordings with exact timings. Costly, but invaluable to the serious ornithologist.

Bird Sounds in Close-up and Bird Sounds in Close-up, Volume Two. *Victor Lewis, 1969 and 1970. Two 30-cm discs, Golden Guinea GGL 0483 and GGL 0484. Pye Records. £1.55 each. (129 & 141)*

Good value. Fine recordings of 40 or so species on each, arranged by habitat. Written commentary on leaflet, combined with sound signals on record to indicate breaks, but species not announced, which makes the discs rather difficult to follow. (The first volume has also been published by Pickwick International Ltd on Hallmark HMA 246 at £1.35, and is available in this edition from RSPB.)

Bird Song Adventure. *Patrick Sellar & Victor Lewis, 1972. 30-cm disc, Golden Guinea GGL 0485. Pye Records. £1.55. (148)*

Specially interesting for its coverage of northern species, with recordings from Sweden, Finland, Iceland and Greenland, as well as Shetland and England. Some rare and marvellous sounds include waders at their arctic breeding grounds. Fifty-five species, no announcements. Not always easy to follow from leaflet notes.

British Wild Birds in Stereo. *John Burton & David Tombs, 1974. 30-cm stereo disc, REC 197, or cassette, RMC 4008. BBC Records and Tapes, obtainable from RSPB. £2.50 (disc), £4.50 (cassette). (174)*

One of the few stereo records published in Britain. Arranged by habitat, with atmosphere and individual species sequences, each announced with vernacular and scientific names and listed with recording details on sleeve. Better for some highly enjoyable listening than for identification use. About 50 species can be heard.

Wild Tracks 1-8. *John Kirby, 1973-75. Eight cassettes. Available from John Kirby, 10 Wycherley Avenue, Middlesbrough, Cleveland TS5 5HH, or from RSPB. £2 each. (178)*

The only set of cassettes covering most common British birds. High-quality recordings and reproduction. Grouped by place or type of species: 1 Shetland, 2 Teesmouth Estuary, 3 Woodland, 4 Moorland and Water-side, 5 Summer Visitors, 6 Garden Birds and Dawn Chorus, 7 More Water Birds, 8 More Small Birds. About 130 species in all. No announcements, but brief details of recordings on card folded in cassette case. About 30 minutes' playing time on each cassette.

Highland Sounds. John Kirby, 1978. One cassette. Available as previous entry. £2.

Splendid sounds from many exciting birds of the wild mountain places of Scotland, superbly recorded and well reproduced. About 25 species in half an hour's playing time. Notes on card in cassette case.

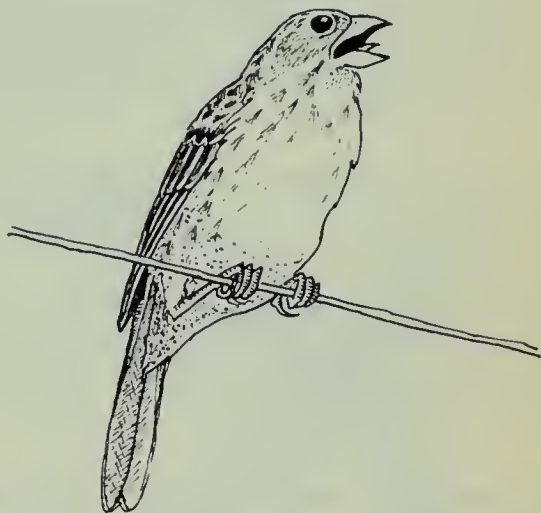
British Wildlife Habitats Nos. 1 & 2. Richard Margoschis, 1976 and 1978. Two stereo cassettes. Available from Richard Margoschis, 80 Mancetter Road, Mancetter, Atherstone, Warwickshire CV9 1NH, or from RSPB. £2.25 each.

The first cassette presents a dozen evocative atmosphere recordings of birds in various environments; the second presents 16 woodland sound scenarios at different times and seasons of the year, with four mammals as well as a good variety of birds. Effective stereo sound pictures. Good aesthetic appeal. Explanatory notes on inlay cards. Playing time 35 and 52 minutes respectively.

Continental publications

Birds of the House and Garden and Calls of Small Birds (Danish). Danish Ornithological Society, 1972-73. Two cassettes, DOF201 and 202, or two 12.5-cm reels of tape recorded half-track at 9.5-cm/sec. Dansk Ornithologisk Forening, Faelledvej 9, 2200 Copenhagen N, Denmark. (153 & 163)

The second tape/cassette is uniquely valuable for comparing and identifying calls in the field, and each species is introduced by English as well as Danish name. Duplicated notes with English and scientific names accompany both. The two cassettes cover 36 and 51 species (many the same) respectively.



Stimmen der Vögel Südosteuropas. Michael Schubert, 1975. 30-cm disc, Eterna 8 21 611. Veb Deutsche Schallplatten, DDR-1197 Berlin, Gross-Berliner Damm 27-31, East Germany. About 1.50 Marks. (179)

An important disc, with high-quality recordings of many interesting species from southeast Europe. No announcements; scientific names in sleeve notes.

A Sound Guide to the Birds of Europe. Jean-Claude Roché, 1964-66. Twenty-seven 17-cm 45 rpm discs, P001-P027. Echo Institute. Available from L'Oiseau Musicien, 50 rue du Dr Calmette, Sequedin, 59320 Haubourdin, France. FF 21.33 each. (68, 75 & 100)

Over 250 species in clear recordings, systematically and neatly arranged, each disc covering a distinct family or group. Announced in French. Scientific names on sleeve, with notes in French.

A Sound Guide to the Birds of the Maghreb (North Africa). Jean-Claude Roché, 1978. Five 17-cm $33\frac{1}{3}$ rpm discs as boxed set with booklet. Echo Institute. Available from L'Oiseau Musicien (address as above). FF 40.00. (115)
Forty-three species of North Africa. Good full notes in booklet available in English.

Oiseaux de Mer et d'Etangs; Oiseaux Méditerranéens; Oiseaux Familiers; Oiseaux de Forêts et de Montagnes; and Oiseaux Scandinaves et Lapons. Jean-Claude Roché, 1968-70. Five 30-cm discs, Go1-Go5. L'Oiseau Musicien (address as above). FF 48.00 each. (Go2, Go3 and Go4 are available as cassettes, FF 43.00 each). (116 & 135)

A series of bird concerts from different regions. Attractive, with many interesting species, but not very good for identification. Notes in French, English and German, plus scientific names, on sleeve.

Meilleurs Chanteurs. Jean-Claude Roché, 1969-70. Fifteen 17-cm 45 rpm discs, Po33-Po47. L'Oiseau Musicien (address as above). FF 18.00 each. (134)
Each side is devoted to a good songster. Eleven discs of European species, three of African and one of West Indian. A joy to listen to.

Die Sprache unserer Spechte. Arno Graul et al., 1974. 30-cm disc, Graul 742, and booklet. Arno Graul, Kisslingweg 44, 7130 Mühlacker, West Germany. About DM25. (173)

Compares the sounds of all ten central European woodpeckers (Picidae). Brief introductions on disc; full text with photographs, sound spectrograms and oscillograms in 12-page booklet bound into sleeve. All in German, but scientific names given.

Vögel des Balkans. H.-H. Bergmann, 1976. 17-cm 45 rpm disc, Kosmos 09017-5. Kosmos Verlag, Postfach 640, D-7000 Stuttgart 1, West Germany. DM9.80.

Eight species from Greece and Bulgaria, all except one excitingly unfamiliar to the British or Irish birdwatcher. Scientific names with German notes in folded sleeve.

Greifvögel und Eulen. Hubert Reisinger, 1977. 17-cm 45 rpm disc, Kosmos 04373-8, and booklet. Kosmos Verlag (address as above). DM16.80.

Seven raptors and seven owls (Strigiformes) of Europe, including some rarer species. Notes with scientific names and pages from German edition of *Hamlyn Guide* in 24-page booklet bound into sleeve. Expensive, but interesting.

So Singen unsere Vögel. Hans Traber, 1973 (original edition 1958-61). Two 30-cm stereo discs, EL 12150-1. Ex Libris, Postfach 8023, Zürich, Switzerland. (184, 35)

This welcome re-issue allows us to hear the fine recordings used for the first six 'Listen . . . the Birds' discs, previously available through the RSPB but now discontinued. About 70 common European landbirds. Generous

needle time for each. No announcements. Notes in German and French, with scientific names, in booklet.

Vogelstimmen unserer Heimat. Volumes 1, 2 & 3. Bernd Eggert, 1977-78. Three 30-cm stereo discs, Europa 111 080.2, 111 081.0 and 111 082.9, or stereo cassettes, 511 080.7, 511 081.5 and 511 082.3. Miller International Schallplatten GmbH, Postfach 1280, 2085 Quickborn über Pinneberg, West Germany.

Excellent straightforward presentation of the typical sounds of nearly 100 of the commoner European birds, but only German names are spoken and printed in the leaflet notes.

I Fåglars Spår. Sten Wahlström, 1978. 30-cm stereo disc, SWPAB-5, or cassette. Sten Wahlström, Nebulosvägen 27, 175 60 Järfälla, Stockholm, Sweden. Apparently obtainable from Bra Köp, Södra Vägen, 263 000 Håganäs, Sweden. Swedish Kr 37.50 (disc or cassette).

An interesting and delightful series of stereo sound pictures from 13 different places in northern Europe. Attractive booklet with colour photographs and full details about recordings in Swedish. About 50 species can be heard.

Other publications

A Treasury of New Zealand Bird Song. Kenneth & Jean Bigwood, 1971 (original edition 1959). 30-cm disc, Kiwi SLD-25. A. H. & A. W. Reed, 182 Wakefield Street, Wellington, New Zealand. Available from Discurio, 9 Shepherd Street, London W1Y 7LG. £3.49

Thirty species, no fewer than 11 of which are introduced British ones! Spoken introductions, vernacular names only.

A Treasury of New Zealand Bird Song, Record No. 4 (Supplement No. 1) and Sea Birds Calling (Supplement No. 2). K. & J. Bigwood, and G. R. Williams et al., 1961 and 1972. Two 17-cm 45 rpm discs, Kiwi EC-25 and EC-34. A. H. & A. W. Reed (address as above). Available from Discurio (address as above). £1.25 each.

Each disc presents a further ten indigenous species.

Australian Bird Calls. Frank Cusack & Redvers J. Eddy, 1966. 30-cm disc WG-B-2493, or cassette. W & G Distributing Co. Pty Ltd, Melbourne, Australia. Available from Australian Gift Shop, Western Australia House, 113 Strand, London WC2. £7.50 (disc or cassette).

Includes 30 characteristic birds recorded in Victoria and Northern Territory. Spoken commentary and brief notes on sleeve with scientific names. Expensive.



Birds of South Africa and Birds of West Africa. *Jean-Claude Roché, 1971-73. Two 30-cm stereo discs, Go8 and Go9. L'Oiseau Musicien (address as above). FF50.00 and FF48.00.*

Concerts, not individually separated species. English and scientific names in list of species on sleeve. Notes in English and French.

Voices of African Birds and More Voices of African Birds. *Myles E. W. North, 1958 and 1964. Two 30-cm discs. Cornell University Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca, New York 14853, USA. About \$8 each.*

Comprehensive selection of 42 and 90 species respectively. Vocally interesting species of East Africa recorded by a pioneer and expert on bird sound (a few on the second disc recorded by Donald and Mary McChesney). Announced. Notes include scientific names.

Birds of the African Rain Forests. *Stuart Keith & William Gunn, 1971. Two 30-cm discs. Federation of Ontario Naturalists and American Museum of Natural History. Probably available from Nature Canada Bookshop, B10-75 Albert Street, Ottawa, Canada K1P 6G1.*

Nearly 100 species, mostly from East Africa, in splendid recordings. Excellent notes on each, with scientific names, in sleeve.

A Field Guide to Bird Songs of Eastern and Central North America. *Peter Paul Kellogg & Arthur A. Allen, 1959. Two 30-cm discs, or cassettes. Houghton Mifflin Company, Boston, USA. Available from Cornell Laboratory of Ornithology (address as above). About \$18 (discs) or \$20 (cassettes).*

Over 300 species, systematically arranged to accompany 'page-by-page' the Peterson field guide book, but an average of only about 15 seconds per species.

A Field Guide to Western Bird Songs. *Peter Paul Kellogg, 1952. Three 30-cm discs, or cassettes. Houghton Mifflin Company (address as above). Available as above. About \$20 (discs) or \$24 (cassettes).*

Over 500 species of the western United States, Hawaii and Alaska, arranged systematically to accompany the Peterson guide book for western birds. Again very brief needle time for each species.

Beautiful Bird Songs of the World. *William Gunn & James Gullledge, 1977. Two 30-cm discs and booklet. The National Audubon Society and Cornell Laboratory of Ornithology. Available from Cornell Laboratory of Ornithology (address as above), or from National Audubon Society, 950 Third Avenue, New York 10022, USA. \$20 (plus \$1.75 postage).*

Superb long recordings of some of the most musical songsters from six continents. Each of the four sides has about a dozen species from: Europe; Africa; the Americas; and Asia, Australia and New Zealand. The booklet bound in the sleeve contains beautiful colour plates by Arthur Singer alternating with notes on each species, with scientific names. Lavish and rather expensive.

Birds of Trinidad and Tobago. Terry White, 1977. One cassette. T.C. White, 6c Rosebery Avenue, Harpenden, Hertfordshire. £2.50.

Straightforward succession of short recordings of typical sounds of 31 characteristic species of the two islands. Handy aid for the tourist bird-watcher, but only the variable vernacular names are announced and listed on the title card.

Ron Kettle, *The British Institute of Recorded Sound*, 29 Exhibition Road, London SW7 2AS

Nightjar habitats and breeding in East Anglia

Rob Berry



Numbers of Nightjars have apparently been declining in Britain for some years. A census is needed: this study provides valuable background information

The characteristic habitat of the Nightjar *Caprimulgus europaeus* is dry heathland with scattered trees, usually silver birch *Betula pendula* or Scots *Pinus sylvestris* and Corsican pine *P. maritima*. A range of other habitats may also be used: chalk downland, open woodland, dense coppice, sand-dunes and even shingle beaches (Bannerman 1955); and, in recent years, clear-felled woods and young pine plantations. Little is known of the species' requirements within these habitats; indeed, the Nightjar has been very little studied recently, although its numbers have been reported to be declining (Stafford 1962, Sharrock 1976). This paper reports a study made during 1968-77.

Study sites

Minsmere

At Minsmere, Suffolk, the heathland covers 176 ha. Silver birch is the dominant tree species, expanding from denser areas into the open heath. There are also some Corsican pine plantations dating from about 1948 and 1966. Heather *Calluna vulgaris* is the dominant field vegetation, although bracken *Pteridium aquilinum* tends to replace it in areas of dense

silver birch. Gorse *Ulex europaeus* and western gorse *U. gallii* are sparsely distributed over the open heath.

This site was studied from 1975 to 1977. Nightjar numbers had also been recorded previously: in each year during 1948-58, R. Wolfendale recorded ten pairs; H. E. Axell recorded about 20 pairs in 1959-62, 15 pairs in 1963 and 1964, about 20 again in 1966, possibly 30 pairs in 1967, and about 20 pairs in each year 1968-74. During the three years of the present study, 15, 13 and nine pairs respectively were recorded. Thus, there was no major decline in the last 30 years, but it must be borne in mind that recorded numbers are clearly observer-influenced.

Dersingham

At Dersingham Fen, Norfolk, an area of 169 ha consists of a dry heath on a plateau sloping down about 100 m to meet a bog. On the dry area, heather is dominant, with scattered silver birch and bracken, the latter again thicker in the birch areas. Small valleys on the slopes are densely covered with rhododendron *Rhododendron ponticum*. In the bog area, typical plants such as *Sphagnum* mosses, round-leaved sundew *Drosera rotundifolia*, common cottongrass *Eriophorum angustifolium* and bog asphodel *Narthecium ossifragum* are found. Within the bog, there are small raised plateaux, covered with vegetation like that of the dry slopes: heather and silver birch. Birch and Scots pines are invading the southern end of the bog.

This site was studied from 1970 to 1977, and held 14-23 pairs of Nightjars, with no evidence of a decline.

Leziate

Leziate, King's Lynn, Norfolk, an area of 126 ha, has scattered silver birches and Scots pines. Heather once more is dominant in the field layer, with bracken again concentrated in the dense birch areas. Where sand extraction has ceased and the land has been levelled, heather, silver birch and, in the damper areas, round-leaved sundew are recolonising. This site was studied during 1968-77, and held five to nine pairs of Nightjars.

Methods

At each site, churring males were plotted on a 1:10,000-scale map. As males churred from various song perches around their territories, there was always the danger of plotting the same bird twice. Therefore, at least three evening visits were made in May to establish exact numbers. To check the accuracy of the plottings, an effort was made to find several nests in each of the three sites. In all, eight to ten visits of between one and three hours' duration were made to each study area throughout the breeding season. The progress of all nests found was followed until either young fledged or the nest failed.

Behaviour

The first Nightjars usually arrived during the second week of May and started churring shortly after; occasionally, however, churring was

recorded in April. For a few days in April 1977, at Minsmere, a male churred in an area of fairly dense woodland away from the traditional nest sites; after it ceased, 17 days passed before another was heard. At Dersingham, Nightjars were also recorded churring during the last week of April, consistently outside the traditional breeding areas, but they ceased after a short period.

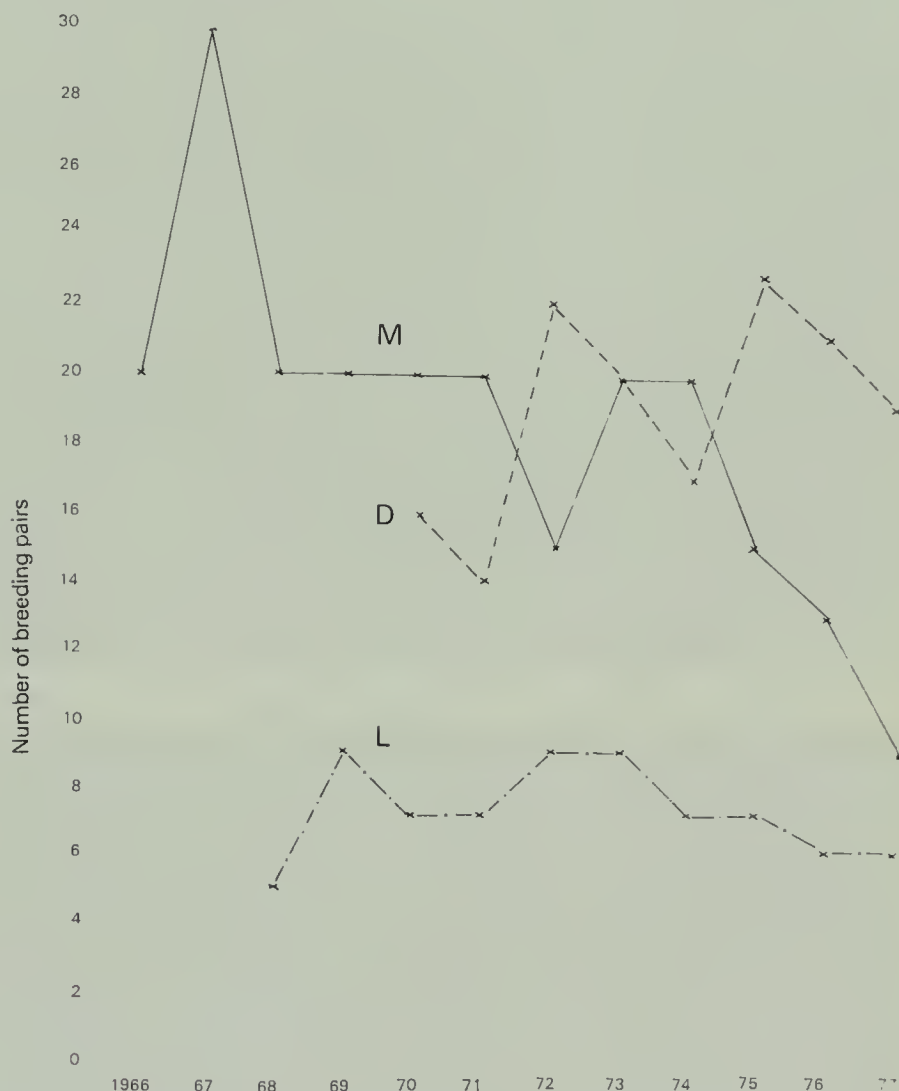


Fig. 1. Numbers of breeding pairs of Nightjars *Caprimulgus europaeus* at Minsmere (Suffolk), Dersingham (Norfolk) and Leziate (Norfolk)

During the breeding season, the males roosted on the ground, usually about 50 m, and exceptionally 100 m, from the incubating female. This accords with the findings of Lack (1932). There was remarkable fidelity to roost sites, both from year to year and within each breeding season. On three occasions when the young were near fledging, the males roosted with the females and young at the nest site.

In the evening, after leaving the roost area, a male Nightjar will churr at various regular song posts in his territory, and then either relieve the female at the nest for a period or gather with other males at a communal feeding area over the heath/fen or woodland plantations. Numerous cases of communal feeding were recorded. At Dersingham Fen, this was regular

Table 1. Primary vegetation of 43 territories of Nightjars *Caprimulgus europaeus*, East Anglia, 1975
Dom=dominant (or co-dominant); Pres=present; Abs=absent

	MINSMERE			DERSINGHAM			LEZIATE		
	Dom	Pres	Abs	Dom	Pres	Abs	Dom	Pres	Abs
Heather <i>Calluna vulgaris</i>	13	—	—	13	10	—	5	2	—
Silver birch <i>Betula pendula</i>	8	5	—	23	—	—	7	—	—
Pine <i>Pinus</i>	—	2	11	—	6	17	—	4	3
Bracken <i>Pteridium aquilinum</i>	—	11	2	—	23	—	—	3	4

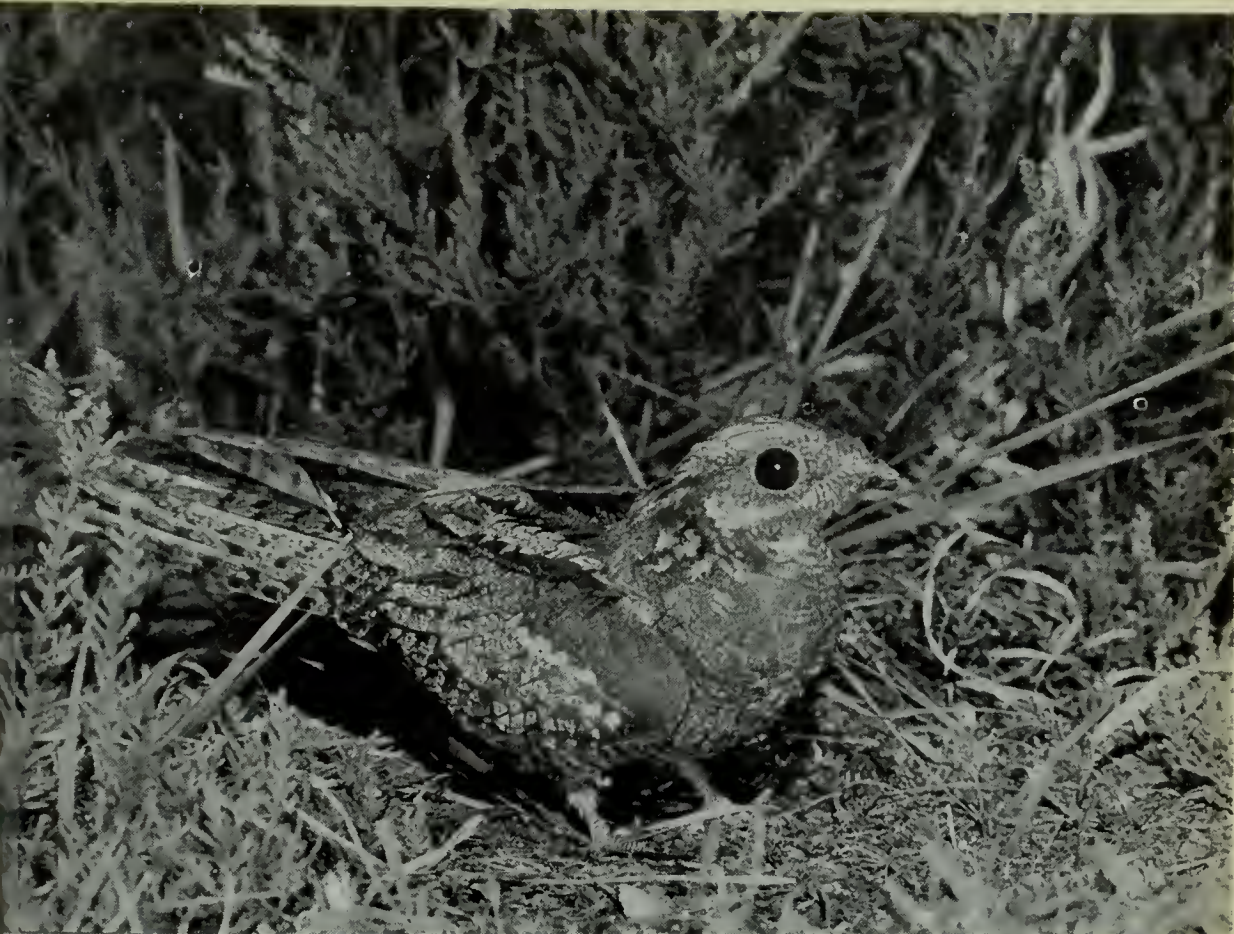
in 1970, most memorably on the evening of 14th June 1974 when 14 Nightjars were observed together in the failing light hawking for insects over a bog area of no more than 3 ha. At Minsmere, in June 1965, 12 were seen together over the heath during late evening; and, on 21st May 1976, up to four were observed over the same area. Another record concerned eight individuals together over a sand quarry at Leziate. These crepuscular gatherings were always away from any Nightjar breeding territories, and in all cases both males and females were present. Communal feeding was also familiar to Lack (1932): ‘it is well known that several Nightjars will foregather to a place where food is especially abundant e.g. around an old oak [*Quercus*] tree.’

Habitat

In 1975, the vegetation of 23 Nightjar territories at Dersingham, 13 at Minsmere and seven at Leziate was studied within 100 m of the centre of activity of each singing male (table 1 and figs. 2-4). Heather was always the



Fig. 2. Distribution of breeding Nightjars *Caprimulgus europaeus* at Minsmere, Suffolk, 1976.
Scale 1: 20,000. Representations of nest sites/territories are diagrammatic



97 & 98. Nightjars *Caprimulgus europaeus*, Surrey, August 1974 (Michael W. Richards)





99 & 100. Nightjars *Caprimulgus europaeus*, Suffolk, June 1948 (Eric Hosking)



dominant ground vegetation at Minsmere and Leziate. In slightly fewer than half of those at Dersingham, heather was merely present, being replaced in the lower, damper areas by *Sphagnum* moss and associated stations of round-leaved sundew and common cottongrass. At all three study sites, the heather varied considerably in height from 10 cm to 90 cm; it was interspersed with a few plants of bell heather *Erica cinerea* and, at Minsmere and Dersingham, even with cross-leaved heath *E. tetralix*. There were occasional patches of bare ground within the heather areas, particularly around the silver birches and Scots pines.



Fig. 3. Distribution of breeding Nightjars *Caprimulgus europaeus* at Dersingham Fen Norfolk, 1975. Scale 1:20,000. Representations of nest sites/territories are diagrammatic

Silver birch occurred in all the territories studied, with considerable variation in height and density. Growth ranged from 1 m to 7 m, and from isolated trees to dense thickets. At all sites, the birch was advancing rapidly into the heath, and at Dersingham into the bog as well. Scots and Corsican pines were the only other widespread trees, but were never dominant; the dense plantations (ten to 20 years old) were not used for breeding, although one Scots pine plantation at Snettisham, close to the Dersingham study area, held a pair of Nightjars for eight years, after which it became dense and overgrown.

Bracken was found in a number of territories in each of the three sites, but was never the dominant ground vegetation; the thickest areas were always under the shelter of and within the dense birch areas, and growth was considerably retarded once it penetrated the open heath. While heather, silver birch, Scots and Corsican pines and bracken formed the primary vegetation of the territories studied, all those at Minsmere included a scattering of gorse and western gorse. Some Dersingham territor-



Fig. 4. Distribution of breeding Nightjars *Caprimulgus europaeus* at Leziate, Norfolk, 1975. Scale 1 : 20,000. Representations of nest sites/territories are diagrammatic

ies contained dense clumps of rhododendron. A number of territories at all three study sites were transected by public footpaths or bridleways. Nightjars seemed undeterred by these, on one occasion even nesting within a few metres of a public right of way.

Density and territory size

The densities of Nightjars at each of the three study sites varied considerably from year to year (table 2). The maximum was one pair per 5.87 ha, at Minsmere in 1967 (when the younger Corsican pine plantations were more suitable for breeding Nightjars); the minimum was one pair per 25.2 ha, at Leziate in 1968, but this site included sand-quarrying areas which were obviously unsuitable.

At Minsmere, the site for which most figures are available, the average density during 1948-77 was one pair per 12.8 ha. This accords well with Lack's (1932) findings on Kelling Heath, Norfolk, where 'the density can be reckoned as one pair per 30 acres (12.14 ha)'.

Table 2. Highest and lowest densities of breeding Nightjars *Caprimulgus europaeus* at three study sites in East Anglia

	NUMBER OF PAIRS		DENSITY (ha per pair)	
	Max. (year)	Min. (year)	Max.	Min.
Minsmere, Suffolk (176 ha)	30 (1967)	9 (1977)	5.87	19.56
Dersingham, Norfolk (169 ha)	23 (1975)	14 (1971)	7.35	12.07
Leziate, Norfolk (126 ha)	9 (1969)	5 (1968)	14.00	25.20

Actual territory sizes, however, were relatively small, each male's singing posts encompassing an area of approximately 5-6 ha. In both 1976 and 1977, at Minsmere, three pairs bred within an area of 16 ha, an average territory size of 5.3 ha.

It is evident that actual territory sizes were smaller than density figures imply because the birds were not uniformly distributed but tended to occur in a broad band along advancing woodland edges. Mean distances from nearest neighbour were 164 m at Dersingham and 172 m at Minsmere. Uniformly spaced at such intervals, territories would be about 2.4 ha in extent, a density greater than any found. The discrepancy is no doubt due to feeding areas being outside the territories, as at Dersingham, where Nightjars nested on the dry heath and fed over the bog.

Nest site selection

Nightjars were very faithful to their nest-site areas from year to year: although none was found nesting in a clearing used in earlier seasons, one nest at Minsmere in 1977 was only 45 m from the previous year's.

During 1968-77, a total of 18 nests was located. They had several features in common. All were situated near or under a sheltering tree: once a Scots pine, but in all other cases a silver birch. The average height of birches at the nest, and indeed of those within a 15-m radius, was only 3 m. There was always a scattering of trees in the vicinity of the nest site, but dense areas of birch or pine were avoided, even though small, apparently suitable clearings were available. A very small clearing was always used for the site, the largest recorded being only 2 m \times 2 m. Another apparently significant feature of sites was the presence of heather, which ranged from 20 cm to 60 cm in height and from dense to sparse distribution. It was utilised a great deal by young Nightjars for concealment during the day, and quite possibly for cover in hot weather such as that in 1976. Bracken was recorded at only seven sites: it was always very sparse and in most cases consisted of only half a dozen fronds. Otherwise suitable clearings in the bracken areas were avoided, suggesting that these were not favoured Nightjar nest sites. Dead logs were found at only three nests, although Bannerman (1955) mentioned that these occurred frequently.

The height and distribution of trees, and the size of clearings in the heather beside them, would seem the two factors which influence a Nightjar's choice of nest site. The optimum nesting habitat is thus within the area where silver birch scrub is expanding across open heathland, or where glades of heather up to 80-100 m in diameter have survived within the dense birch.

Breeding

The eggs were laid in a bare and very shallow scrape, always to one side of the clearing, which enabled the incubating bird to blend with the surrounding vegetation. Two eggs proved to be the rule in all nests found. Of eight pairs at Minsmere in 1976-77, four reared two young, one reared one (second egg infertile) and three failed (one with eggs, two with young): thus, eight nests produced nine young. Both failures with young



101. Nightjar *Caprimulgus europaeus* hovering, Suffolk, June 1949 (Eric Hosking)

were thought to be caused by foxes *Vulpes vulpes*: in each case an occupied earth and fox faeces were found nearby.

Males were never found incubating eggs during the day; this was also the experience of Lack (1932). Second clutches were recorded on single occasions at Leziate in 1969 and at Dersingham in 1972, but none was found at Minsmere in 1976-77, despite a thorough search. This is incompatible with Lack's (1929) observation that the Nightjar is normally double-brooded and that the male regularly takes over the young when they are about 13 days old in order to allow the female to start the second clutch (which she would otherwise not have time to do). On no occasion during the present study was the male found in charge of the young, even at the two sites with double broods.

Soon after hatching, the young move away from the nest site, the distance travelled depending on the access from the clearing: if there is a surrounding dense growth of heather, they will move to the edge for cover and remain there until they fledge. Many sites, however, have the old runs of rabbits *Oryctolagus cuniculus* or narrow pathways leading off them, and the young use these to move from the nest area. In 1969, at Leziate, two travelled over 25 m from the time they hatched until they fledged, but 2-3 m was normal. Lack (1932) also noted variable behaviour by the young and stated: 'I have found young Nightjars which wandered far from the nest when a few days old, usually, but not only, in cases when the nest was repeatedly visited. On the other hand I have known them remain within a three foot [1 m] radius of the nest until almost able to fly.'

Causes of decline

That the Nightjar is declining seriously in Britain was borne in mind throughout the study. Possible reasons were sought.

The prime habitat of open heath with encroaching silver birch is, by its very nature, self-destructing: once the birch has completed its advance, the area has reverted to woodland and will support few, if any, breeding Nightjars. One natural vegetation control is grazing rabbits. This species itself, however, suffered a reversal in the early 1950s with the onset of myxomatosis, and areas at Minsmere and elsewhere became rapidly overgrown while the rabbit population was low. This presumably would have benefited the Nightjar, and there is some evidence of this at Minsmere.

The decline may also be primarily associated with climatic change, as with other heathland species such as the Red-backed Shrike *Lanius collurio*, which is also retreating (Bibby 1973). The recent succession of cold, wet springs may have contributed by delaying breeding until late in the season, thus allowing time for only one successful brood instead of two. This possibility would certainly profit from further study.

Another factor possibly exacerbating the decline is human disturbance. Most obvious are sand quarrying at Leziate and the use of part of the heath at Dersingham as a rubbish tip, while leisure activities on the heaths in the breeding season may be damaging (many Nightjars nest close to footpaths). The study found, however, only one nest which possibly failed through human disturbance.

Management proposals

Conservation of the Nightjar is clearly desirable, and necessary, where possible. Some suggestions for management of suitable habitat are outlined below.

Pine plantations which have reached 3 m (about ten years old) are usually unsuitable for breeding Nightjars. In such cases, scattered areas of 20 m × 20 m could be clear-felled throughout the plantation; this could be easily undertaken at a nature reserve such as Minsmere. Similarly, areas within the dense silver birch could be opened up to form large glades. Small clumps of six to ten trees of suitable height should be left standing, with heather and other debris beneath them. Such work has

recently been carried out at Minsmere, and the area will be carefully monitored during the next six years or so to ascertain the use made of the site by Nightjars and other species.

The provision of glades could also improve feeding prospects. Communal feeding is an important feature of Nightjar behaviour: with better knowledge, suitable conditions could be provided.

Management of heathland areas is the reverse process: the trees are left, and the heather beneath them is removed to expose the bare ground for suitable nesting sites. This is necessary because, as a rule, when silver birches are expanding over open heathland (as is happening at Dersingham and Minsmere), they are usually so prolific that they even grow through the dense heather and so have no suitable clearings beneath them. Intentional or accidental burning of heather, which occurs widely, provides breeding habitat if birch or pine clumps, with some heather cover, remain; but this causes much damage to other fauna and promotes the spread of bracken, and is therefore not to be recommended. When undertaking any type of management, the existing habitat should always be studied in order to ensure that the work will not be detrimental to other species.

Acknowledgements

I should like to thank Dr C. J. Bibby for his guidance and comments on several earlier drafts of this paper; also Mrs F. C. Britton for making available some of her late husband's data for Leziate, and Dr C. J. Cadbury for supplying Nightjar figures for Dersingham for 1976-77.

Summary

Habitats and breeding of the Nightjar *Caprimulgus europaeus* were studied at three sites in East Anglia. Breeding behaviour and instances of communal feeding are described. The main habitat features were heather *Calluna/Erica* and silver birch *Betula pendula*; plantations of Scots *Pinus sylvestris* and Corsican pine *P. maritima* and dense thickets were avoided. Densities of breeding pairs are considered. Areas chosen for nest sites were investigated and two factors, a small clearing and a sheltering tree, usually a silver birch averaging 3 m in height, were found to be typical. The normal clutch size was two eggs, and second clutches were found only twice (*contra* Lack 1929). Possible reasons for the species' decline in Britain are discussed: influencing factors could include the advance of silver birch over heathland, which has accelerated in some areas since myxomatosis; the fact that usually only one brood now seems to be reared; and human disturbance on the heaths for industrial and leisure purposes. Some management possibilities are suggested to contribute to the conservation of the Nightjar in Britain.

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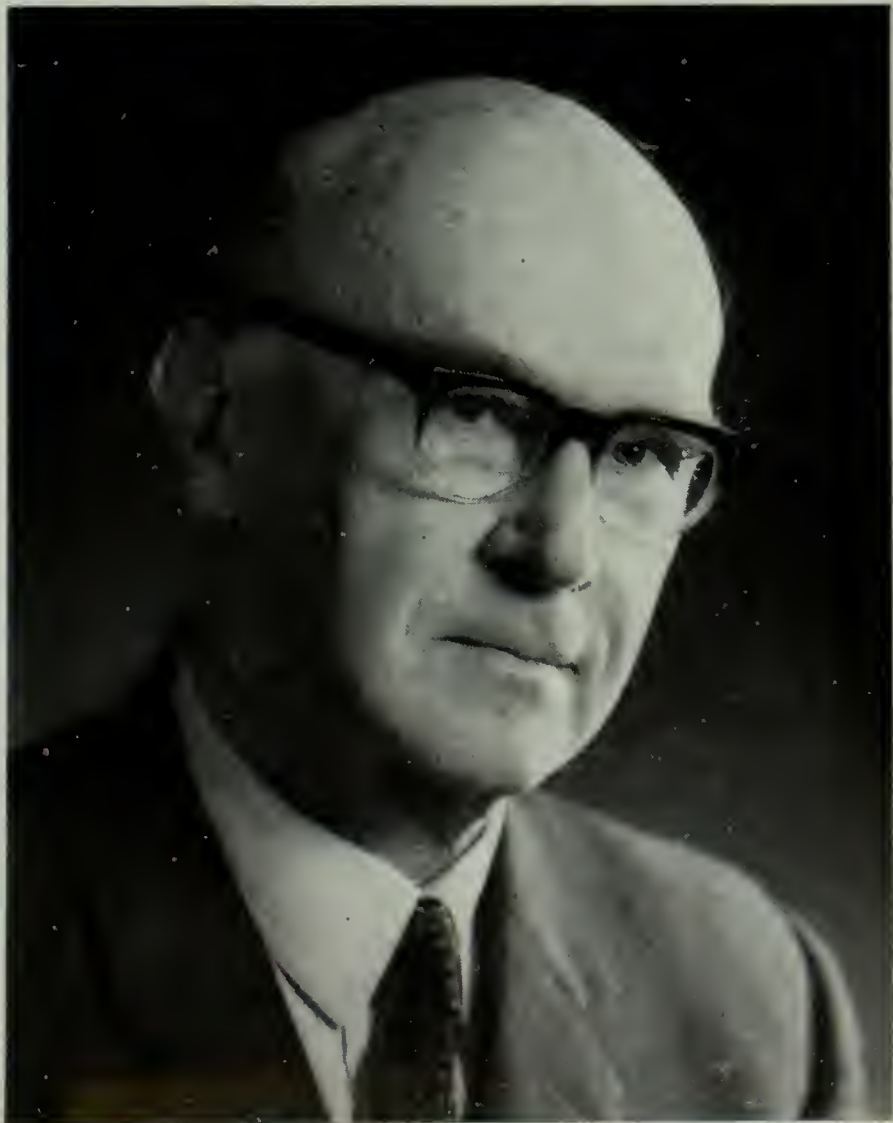
Obituary

Rev. Edward Allworthy Armstrong, BA, MA, Hon MA (1900-1978)

Edward Armstrong, who died last December aged 78, can be described as a polymath whose interests always centred around living things, particularly birds. As a young child, he became entranced by the beauty of nature and natural things and concluded, while he was yet a small boy, that he himself could find out things which grown-ups did not know. From that moment, he became a practising naturalist. Almost simultaneously, this wonder at the beauty of the natural world and of things waiting to be discovered became linked with his deep religious faith. As he said towards the end of his life: 'The appreciation of nature leads to wonder, and wonder to worship.'

Armstrong's basic training at Queen's University, Belfast, in philosophy and psychology, was capped by two years' theological study at Cambridge. As an Anglican priest, he worked in parishes as varied as Kowloon (Hong

102. Rev. E. A. Armstrong (1900-1978) (*Ramsay & Muspratt*)



Kong), Ipswich, Doncaster and Leeds; and, finally, for 23 years at St Mark's, Cambridge. He acquired his great experience as a field naturalist in many different environments; for, as a result of his period in Hong Kong, he travelled around the world, visiting, among other fascinating regions, the Mekong River and the forests of southeast Asia, the California desert, the Tropical Biological Laboratory at Barro Colorado in the Panama Canal Zone and then—via Colombia and Venezuela—Trinidad and Tobago.

His first major work in ornithology was *Bird Display: an introduction to the study of bird psychology* (1942). The impact of this work, which in fact antedated the establishment of ethology as a distinct scientific discipline in this country by nearly ten years, was partly due to a friendship (shared by H. Eliot Howard) with the famous physiologist Dr F. H. A. Marshall, FRS, of Christ's College, Cambridge, who was the pioneer in unravelling the effects on behaviour, and particularly on displays, of hormones secreted by the anterior pituitary. This book had a key influence on a number of biologists and ornithologists. On coming to Cambridge in 1943, he started his intensive study of the Wren.

He was fortunate in having access, over many years, to the Adams Road Bird Sanctuary (managed by the Cambridge Bird Sanctuary Club). This is in fact the 'Wren Wood' of his book. He had the greater part of its population of Wrens colour-ringed throughout the period of his study. It was the years of work on this one species which led to his 300-page 'New Naturalist' monograph *The Wren* (1955). This is undoubtedly one of the best known scientific studies of a single British bird species. His work on the Wren was, however, not completed by this book. The final conclusion of the study was published as recently as 1977: 'Behavioural adaptations of the Wren (*Troglodytes troglodytes*)' in *Biological Reviews* (52: 235-294), written jointly with Dr H. E. Whitehouse. He also produced another very successful 'New Naturalist', *The Folklore of Birds* (1958).

Another major contribution to ornithology was his book *The Study of Bird Song* (1963). This, while mostly antedating the new methods of study such as the sound-spectrograph, is a particularly valuable work of reference for the earlier phases of the subject, and is of especial value in emphasising, when considering the nature of a bird's utterances, the importance of taking into account matters such as the nature of the pair-bond, foraging behaviour, coloration and other adaptations. A highly original and very beautiful essay, 'Aspects of the evolution of man's appreciation of bird song', appeared in *Bird Vocalisations: their relation to current problems in biology and psychology* (edited by R. A. Hinde, 1969). This shows in a striking manner his wide reading, immense learning and easy style of writing.

In 1973, Armstrong produced a study of St Francis of Assisi: *St. Francis: nature mystic—the derivation and significance of the nature stories in the St. Franciscan Legend*. In this, he showed that St Francis himself had no particular knowledge of natural history and that the stories which have accumulated around his memory did not come from St Francis himself, but were part of a rich body of Christian nature legend, brought, centuries before, to

Europe from Celtic or eastern sources by Irish pilgrims and missionaries. As Armstrong says, 'The wolf of Gubbio is a creature out of books, not out of the woods.' And, indeed, the tradition is that St Francis, at one time, enjoined the brethren to spread grain for the Swallows at Christmas! The book, in spite of its derogatory conclusions about the saint as a naturalist, is delightful reading, based on solid learning and wide sympathy, breaking new ground in many directions.

Another remarkable production was *Shakespeare's Imagination: a study of the psychology of association and inspiration* (1946). This started as an attempt to find out how good a naturalist Shakespeare in fact was. The conclusion was inevitable: he was no naturalist at all! The author discovered, however, that the poet's use of metaphors or examples reveals an astonishing system of 'image clusters' which occur again and again throughout his works. The book had a wide success in the USA and in this country. Sir Alec Guinness, in a lengthy review, described it as: 'The most stimulating, the most pleasing and the most satisfactory book on Shakespeare that I have ever read.'

The style of Armstrong's writing was such that the very first of his books, *Birds of the Grey Wind* (1942), which combines a poetic appreciation of the scenery, life and folklore of his beloved Ireland with an exact and scientific attitude towards its birdlife, received the award of the Burroughs Medal in the USA. This, so far as I know, is the only occasion that this distinction has been achieved by a non-American. Apart from this award, Armstrong was created MA *honoris causa* by Cambridge University in 1952, and joined Jesus College. In 1959, he was awarded the Union Gold Medal of the BOU on the occasion of its centenary celebrations. At about the same time, he was elected a Corresponding Fellow of the American Ornithologists' Union. In 1956, he received the Stamford Raffles Award of the Zoological Society of London for 'distinguished contributions to ornithology'.

Edward Armstrong's ability to achieve all this, in the apparently non-existent spare time of a faithful priest charged with the care of souls, was very remarkable. He used to think of himself as the last in a long line of famous parson-naturalists. Few priests or naturalists could emulate his immense erudition; but perhaps his astonishing achievements may induce others to follow in his footsteps and thus ensure that he is not after all the last of the series.

W. H. THORPE

Fifty years ago . . .

'BLACK REDSTARTS IN PEMBROKESHIRE. On November 21st, 1928, a male Black Redstart (*Phoenicurus o. gibraltariensis*) was seen near the cliffs at Martinshaven, the extreme south-west corner of Pembrokeshire. R. M. LOCKLEY.'

'PINK-FOOTED GEESE IN MIDDLESEX. On January 13th, 1929, there were four Pink-footed Geese (*A. brachyrhynchus*) far out on the Upper Reservoir at Staines. T. H. HARRISON. P. A. D. HOLLAM.'

'BREEDING OF LESSER TERN IN SOMERSET. In July, 1928, I found a pair of Lesser Terns (*Sterna a. albifrons*) breeding on the coast of Somerset. B. W. TUCKER.' (*Brit. Birds* 22: 371-376, May 1929)

Bird Photograph of the Year

The 91 colour transparencies submitted by 36 photographers for the 1978 competition were of such a very high standard that the three judges—Eric Hosking, Michael W. Richards and Dr J. T. R. Sharrock—had great difficulty in selecting and then reducing the short-list, and had even greater problems separating the final entries. The judges were, however, unanimous regarding the final placings:

1st	Green Woodpecker preening (plate 103)	Dr E. C. Fellowes (Dumfries)
2nd	Pair of Greenshanks at nest (plate 104)	G. V. Adkin (West Yorkshire)
3rd=	Tawny owl in flight (plate 106)	Donald A. Smith (Ayrshire)
3rd=	Woodcock at pool (plate 105)	Michael C. Wilkes (Worcestershire)
3rd=	Curlew eating crab (plate 107)	Keri Williams (Mid-Glamorgan)

Remembering that the rules of this competition state that interest and originality are sought, as well as technical photographic excellence, the judges recorded their admiration of one case of opportunistic photography, of a very rare Scottish breeding bird:

HONOURABLE MENTION Goldeneye with brood
(plate 108)

A. G. Stewart (Ayrshire)

To obtain the photograph of the Green Woodpecker preening as it clings to its nesting tree (plate 103), Dr Fellowes used a hide on top of a 5½-m scaffolding tower which he had erected on a steep slope. Not only is the bird and its background of lichen-covered trunk perfectly sharp and the whole picture artistically pleasing, but the woodpecker is engaged in a piece of interesting and seldom-photographed behaviour.

Although—or perhaps because!—Greenshank nests are very difficult to find, they are favourite subjects for bird-photographers visiting Scotland. Seldom, however, are the two adults portrayed together at the nest (only once in 60 hours of observation did the male visit this particular nest, and Eric Hosking has never managed to capture this event, despite many days at Greenshank nests). It would be hard to improve on G. V. Adkin's achievement (plate 104): the birds' strongly patterned—yet delicately camouflaged—plumage, the nest and the typical Sutherland bog-with-stump habitat are all portrayed superbly.

All five winning entries this year were technically near-perfect. The judges were totally unable to separate the third to fifth photographs, so awarded three joint third-placings. Owls in flight are attempted by many photographers and some excellent black-and-white photographs have been obtained, including many published in *British Birds*; none, however, has bettered Donald Smith's Tawny Owl returning to its nest (plate 106);



103. BIRD PHOTOGRAPH OF THE YEAR Green Woodpecker *Picus viridis* preening, Dumfriesshire, June 1978. (Pentax S1A with 400 mm Novaflex lens and two flash heads) (E. C. Fellowes)



104. Pair of Greenshanks *Tringa nebularia* at nest, Sutherland, May 1978. (Nikon F2 with 135 mm lens, Ektachrome 64, 1/60th second at f11) (G. V. Adkin)

105. Woodcock *Scolopax rusticola* at pool, Warwickshire, June 1978. (Olympus OM1 with 200 mm Zuiko lens and Braun F700 with two flash heads, Kodachrome 64, 1/60th second at f8) (Michael C. Wilkes)





1106. Tawny Owl *Strix aluco* flying to nest, Ayrshire, May 1978. (Motor-driven Nikon F2 with 50 mm Nikkor lens, Ektachrome 200) (Donald A. Smith)

1107. Curlew *Numenius arquata* eating crab, Dyfed, August 1978. (Nikon F2 with 300 mm 4.5 Nikkor lens, Kodachrome 64, 1/500th second at f5.6) (Keri Williams)





108. Female Goldeneye *Bucephala clangula* with brood, Highland, May 1978. (Minolta SRT101 with Tamron 300 mm lens and 2× Vivitar tele-converter, Kodachrome 64, 1/125th second at f8)
(A. G. Stewart)

as it did so, it interrupted an infra-red beam and triggered the motor-driven camera. Such shots have seldom been attempted in colour.

Michael C. Wilkes's woodland pool shots are already well known to *BB* readers, since his Nightingale *Luscinia megarhynchos* won the Bird Photograph of the Year competition in 1976 (*Brit. Birds* 70: 133-136). On one hot June afternoon, after waiting for three hours in his hide, the same pool provided him with another exciting experience. A shadowy shape appeared through the undergrowth and, as it reached the edge of the pool, resolved itself into a Woodcock; it probed in the mud and then started bathing. Mr Wilkes managed to obtain four shots of it before it walked off, back into the woods: the marvellous portrait reproduced here (plate 105) was one of them.

Over the past four years, Keri Williams has erected several hides on a small Welsh estuary especially to watch and photograph Curlews. His entries for the competition showed three studies of Curlews: one bathing, one drinking (which was short-listed) and—the one which gained third place—a Curlew eating a crab (plate 107). Although the composition of the portrait of the one drinking was perhaps superior, it was the bill-detail of the crab-eating individual which swayed the judges: note the heart-shaped tip to the Curlew's bill, as it grasps the crab. Subsequently, the Curlew held its prey by the legs half way along its bill and, by moving the upper and lower mandibles in opposite directions, broke off the crab's legs before swallowing the body.

Few observers have seen broods of Scottish-bred Goldeneyes; fewer still have photographed them. A. G. Stewart submitted three shots of one particular Highland family: note in plate 108 the two fan-shaped splashes caused by the feet of a duckling which had just dived.

The very high quality was not restricted to the top entries. Among the short-list, the judges welcomed entries from France (Spotted Redshank *Tringa erythropus* by J. Hamon), the Netherlands (Gadwalls *Anas strepera* by Hans Schouten) and Sweden (Greenshank by Lars-Göran Noren). A splendid family group of Long-eared Owls *Asio otus* by D. J. Garner and a stalking Bittern *Botaurus stellaris* by Donald A. Smith also failed by only a whisker to join the other 'equal-thirds'. Gordon Langsbury, however, was perhaps the unluckiest entrant: all three of his transparencies (Great Crested Grebes *Podiceps cristatus*, Bewick's Swan *Cygnus columbianus* and Arctic Tern *Sterna paradisaea*) were short-listed, but were pipped at the post. The short-list also included entries by A. P. Barnes (Linnet *Carduelis cannabina*), J. Moss (Red-breasted Merganser *Mergus serrator*), A. J. Murphy (Great Crested Grebe), Philip Perry (Herring Gulls *Larus argentatus*), Graham Rebecca (Tufted Duck *Aythya fuligula*), J. G. Snowball (Rook *Corvus frugilegus*), Barry Walker (Snipe *Gallinago gallinago*) and N.A. J. Wilde (Tree Pipit *Anthus trivialis* and Cuckoo *Cuculus canorus*). We cannot stress too strongly that the depth of quality was striking . . . and very encouraging for future competitions. Finally, the judges wished to make special mention of three interesting and ambitious attempts by the youngest entrant, 15-year-old Jonathan Mercer; they particularly liked an atmospheric view of distant Mute Swans *C. olor* flying low over the glittering surface of a reservoir at dawn on a misty October morning.

Mystery photographs

29 A female (or eclipse male) dabbling duck seen by itself can pose considerable problems in identification. Unless it flaps its wings, the revealing speculum colour often remains completely obscured. The presence of other species for comparison greatly helps, while an accompanying male in full plumage, as now shown here, though not last month,

109. Pair of Gadwalls *Anas strepera*, Suffolk, May 1978 (J. D. Bakewell)



should always clinch it. This bird is obviously a female Gadwall *Anas strepera*, on the assumption that they are indeed a pair.

Eclipse males do become superficially very like their females, but only for a comparatively short period in summer. Although the complete moult back into breeding plumage may take many weeks or even months, some obviously male features quickly appear in the form of patches of colour or white which no female would have. Additionally, nearly all eclipse males are darker than their females, at least on the upperparts, including the top of the head. The bills of most species, too, remain the same as in breeding plumage.

Looking at the mystery duck, one can immediately exclude Teal *A. crecca* and Garganey *A. querquedula* (it is too large and heavily built), Wigeon *A. penelope* (the head is not small and round and the bill is much too long), Shoveler *A. clypeata* (it lacks the very conspicuously shaped bill) and Pintail *A. acuta* (the plumage spotting is much too coarse, the neck is short and stout, and the head has a dark cap and a dark eyestripe). This leaves Falcated Duck *A. falcata*, Mallard *A. platyrhynchos* and Gadwall.

The Falcated Duck has a uniformly grey bill, usually shows slight signs of a crest, though this can be reduced to a mere shagginess at the back of the head, and is generally rather darker above than below. This combination of characters is not present here.

The distinctions between Mallard and Gadwall are more subtle, and, in poor light or at extreme range, often very difficult. The Gadwall's bill is a little smaller and narrower than that of the Mallard and has quite prominent orange sides to the upper mandible. Although the female Mallard's bill shows a varying amount of orange on it, the pattern is

110. Mystery photograph 30. Identify the species. Answer next month



hardly ever like the Gadwall's. A character that is visible at surprisingly long distances is the shape of the forehead: flat in the Mallard, but distinctly steeper in the Gadwall. Finally, unless the bird is obliging enough to reveal either its speculum or its underparts, both white on the Gadwall, the tail differs between the two species, the Gadwall's being grey-brown, but the Mallard's whitish. A final note of warning on too much reliance on the speculum: on some female Gadwalls, the white is reduced to a single feather (the innermost) and barely shows. MAO

Notes

White Storks migrating at night by utilising oil

flares During the evening of 24th February 1978, I witnessed a large movement of White Storks *Ciconia ciconia* over the Gassi Touil oasis in Algeria (30°N 7°E), the birds apparently using the thermals from the 12 flare stacks situated there. The day had been overcast with little wind, sunset was at 18.30 hours and the first storks were seen drifting in from the south at 19.30. Observations continued until midnight, but the storks stopped passing at 22.30 hours; a similar movement was seen on the same evening at Hassi Masoud, some 200 km to the north.

The storks were well illuminated by the bright, roaring flares, and could be seen and counted as they approached and then ascended in spirals over the rising heat. As the birds flew in, they flapped vigorously to gain height, reaching the area over the stack at an estimated height of some 20 m over the flame and about 80 m above the ground. The smallest spiralling flock was of 15 individuals, the largest about 270, with an average of around 60; the spectacle attracted the attention of many workers at the site, some of whom had seen a similar movement the previous year. It was estimated that, by the time that the birds stopped passing at 22.30 hours, at least 8,000 storks had passed north over the area. The following day saw very few migrants, and only two storks were present on the local rubbish dumps.

White Storks are well known diurnal migrants, but there seems to be little comparable evidence of nocturnal movements on this scale. It would appear to be a recently developed habit, since the flares have been a feature of the Sahara only in the past two decades, since the development of the oil industry. Flare stacks are now present right across the Algerian Sahara, at about 5-km intervals, at this longitude, so it would seem conceivable that thermal migrants could cross the desert at night. G. Bundy (*in litt.*) has informed me, however, that no comparable movement has yet been witnessed at similar Libyan sites.

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Buzzard utilising air from hot-air balloon On 2nd January 1978, while watching a hot-air balloon in flight at Midford, near Bath, Avon, I noticed a Buzzard *Buteo buteo* circling about 20 m above it. As the balloon moved slowly south, the Buzzard travelled in the same direction, gradually gaining height. After about seven minutes, both had travelled nearly $1\frac{1}{4}$ km and the raptor had gained 70-75 m in height. It was a cold, windless day and the Buzzard was obviously getting lift from the heat generated by the balloon's gas flare.

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An even more striking instance of the utilisation of artificial thermals, concerning migrating White Storks *Ciconia ciconia*, is noted on page 229, and a letter on the subject of birds and thermals appears on page 239. EDS

Plumage of juvenile Water Rail During September and early October 1978, there were reports of an odd rail frequenting the muddy edges of the Great Pool on Tresco, Isles of Scilly. The descriptions suggested that it might be a Sora Rail *Porzana carolina* or even a Virginia Rail *Rallus limicola*, but none fitted precisely and the bird remained unidentified. Many observer-hours were spent trying to pin down this elusive bird: on 4th October, it eventually showed itself well to N. R. Davies, R. O'Reilly and me. It looked strikingly unfamiliar: its general shape and upperparts coloration were much like Water Rail *Rallus aquaticus*, but a broad supercilium and the underparts were uniformly sandy-buff, with a dark line through the eye, prominent white throat patch and barred flanks. The undertail-coverts were white, with a hint of buff, and the bill was shorter than an adult Water Rail's, black with red at the base of the lower mandible. It looked noticeably smaller in size than Water Rails nearby, and the dark colour of the bill rendered its full length difficult to see, so that it often looked short-billed. The description agrees with that for juvenile Water Rail given in *The Handbook*, and we identified the bird as such.

The purpose of this note is to draw wider attention to this potentially confusing plumage, which is not illustrated in *The Handbook* or in the standard field guides. While looking for this bird, we also saw a Water Rail with patchy grey-and-buff underparts, which we diagnosed as one in a transitional stage of moult from juvenile to the more familiar first-winter plumage: most field guides illustrate first-winter plumage and label it as 'immature', while one labels it—erroneously—as 'juvenile', which added to the confusion surrounding the Tresco bird.

P. J. GRANT

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Marsh Sandpiper with yellowish legs I was interested to read S. J. M. Gantlett's note concerning a Marsh Sandpiper *Tringa stagnatilis* with orange legs (*Brit. Birds* 71: 418). Jens Kirkeby and I saw and photographed one with bright yellowish legs at Kotu Stream, The Gambia,

on 23rd December 1973. At first glance, we considered the possibility of its being a Lesser Yellowlegs *T. flavipes*, but, after a few moments, we were left in no doubt that it was in fact just a Marsh Sandpiper. Of about 300 Marsh Sandpipers which I have seen in Europe, Africa and Asia, no others have had yellowish legs.

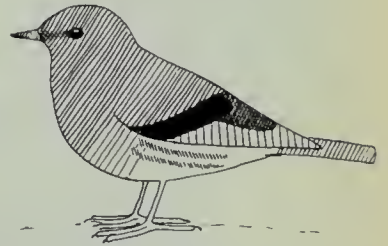
JØRN VESTERGAARD JENSEN

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We have examined Mr Jensen's colour photographs. Many species of wader occasionally have aberrantly coloured bare parts, but this observation is of particular interest because of the danger of confusion with Lesser Yellowlegs. EDS

Dark wing-bar of Alpine Accentor I too have noticed the feature noted by Dr J. T. R. Sharrock (*Brit. Birds* 72: 37-38). I have seen only two Alpine Accentors *Prunella collaris*, but I have noted it each time as being *the* most obvious plumage feature. On 13th June 1977, I had distant views of one at a range of about 100 m on the top of Nemrut Dag, a volcano in eastern Turkey. I noted in my log book: 'Black band on wing very conspicuous.' It was easily the best feature at this range, but I remember at the time how surprised I was, as I had never seen this feature mentioned in field guides. Fig. 1 shows the impression gained in such a distant view.

Fig. 1. Impression of distant Alpine Accentor *Prunella collaris*, Turkey, June 1977 (Keith Vinicombe)



I also saw the one at Portland, Dorset, on 9th, 15th and 30th April 1978, and obtained some excellent prolonged views, down to 3 m. In my general description I wrote: 'Basically nondescript at a distance except for noticeable black band on wing and orangey streaks on flanks.' In my detailed description I wrote: 'Conspicuous black band across wing on greater coverts. This could be very striking at times (especially through binoculars) and undoubtedly the single best feature. However, the band could be overlain to some extent by the median coverts, reducing its conspicuousness considerably. Sometimes the black on one side would be more obvious than on the other.'

I have also noticed the inconspicuousness of the throat patch. Of the Portland bird, I wrote: 'The ground colour was whitish, with vertical rows of small blackish feather tips, nowhere near as obvious as in the books.' I did not see this feature at all on the Turkish individual.

KEITH VINICOMBE

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Robin with appearance of Red-flanked Bluetail On 17th October 1973, a peculiarly coloured robin-like bird was seen in a potato field on

Cape Clear Island, Co. Cork, by three observers who were unable to suggest an identification. Discussions with other observers that evening revealed that it had been seen the previous day and dismissed as an aberrant Robin *Erithacus rubecula*. Thirteen observers visited the field on the morning of 18th October, when the bird was quickly located and watched for two hours at ranges down to 18 m. Subsequent discussion on its identity revealed that eight observers watching from one end of the field were all happy that it was a Robin, while the five who had watched it from the other end of the field felt that the possibility of other species, including Red-flanked Bluetail *Tarsiger cyanurus*, had not been eliminated. A mist-net was erected and, when examined in the hand, the bird was clearly a Robin.

In the field, the bird had only a superficial resemblance to a Robin: it was blue-grey above and white below, with a narrow gorget enclosing the white breast and throat. It looked less dumpy in shape, and was shyer and more skulking in its habits than the local Robins, none of which showed any aggression to it. It mostly fed low down in the potatoes, occasionally coming up onto a bramble *Rubus fruticosus*. The stance was more upright than the locals, with wings drooped and held away from the body, and the manner of head movement was reminiscent of a flycatcher (*Muscicapidae*). Several observers noted its call as being identical to the local birds, but it also uttered a variation quite unlike the latter. The following is compiled from the observers' notes.

Forehead and stripe to eye white. Thin grey line from base of bill to eye. Crown, nape, mantle, rump and uppertail-coverts uniform blue-grey, without even the slightest trace of brown tinge. Tail greyish brown, browner at tip. All wing-coverts blue-grey, as upperparts, with pale tips to greater coverts, giving small wing-bar as on normal Robin. All flight feathers brown. Chin, throat and breast white. Narrow

orange gorget, from eye down to lower breast, not quite joining in centre; orange towards throat and upper breast invisible in field except at closest range. Flanks and belly smoke-grey, with small white patch in centre of belly. Undertail-coverts white. Eye black, with prominent white orbital ring. Bill and legs blackish. Wing 71 mm. Bill 10 mm. Tarsus 23.5 mm. Weight 17.8 g.

The Robin was ringed and released, but was not seen subsequently. On 27th September 1974, a similar, but unringed individual was seen on the island, and was watched until 9th October by several observers, including J. W. Enticott who had seen the 1973 bird. The plumage was very similar to the first bird, differing only in that the amount of orange was slightly more extensive and the flanks and belly were a slightly darker grey, showing more contrast with the white. It must remain in question whether one or two birds were involved, but Robert Spencer (*in litt.*) considers it totally improbable that a correctly fitted ring would fall off within one year.

The fact that the 1973 bird, although watched for a lengthy period under good conditions, had to be trapped in order to satisfy all observers as to its identity, stresses the potential problems created by aberrant individuals. Had it been seen only briefly or at long range, it might have been positively identified as a Red-flanked Bluetail, and possibly even ac-



III & 112. Aberrant Robin *Erithacus rubecula*. Co. Cork, October 1973 (cf. drawings of Red-flanked Bluetail *Tarsiger cyanurus*, *Brit. Birds* 66: 6, fig. 2) (K. Preston)



cepted as such. Several observers have remarked that D. I. M. Wallace's drawings of Red-flanked Bluetails (*Brit. Birds* 66 : 6) showed birds exceedingly similar to the one on Cape Clear Island.

K. PRESTON

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Reviews

The Herons of the World. By James Hancock and Hugh Elliott.

London Editions, London, 1978. 304 pages; 61 colour paintings by Robert Gillmor and Peter Hayman, and line-drawings by Robert Gillmor.

£46.00

At first sight, this is an elegant illustrated bird book, the latest example of a genre now proving so popular, even at high prices. It is large, superbly produced and attractive. It is also, however, an authoritative and well-written guide to a fascinating family of birds. The paintings, superbly printed on good paper and measuring 350 mm by 230 mm, are divided almost equally between two of our most distinguished bird artists, Robert Gillmor and Peter Hayman. They are highly decorative, with the birds set against appropriate backgrounds, and many may be tempted to frame them for more continuous pleasure. No attempt has been made to illustrate every distinct plumage, though some show several, or nests or young. Both illustrators have years of experience and many illustrated books behind them, but neither can have had before such a magnificent opportunity to show their skills, and they have risen superbly to the challenge. Robert Gillmor has excelled himself in design and execution (with the added bounty of many sensitive line-drawings) and if Peter Hayman does not always reach these heights it must be said that he often had to contend with species, such as the bitterns, which are less diverse in shape and colour.

The text is the joint work of a much-travelled amateur, James Hancock, and the now professional ornithologist, Sir Hugh Elliott, who combines world-wide field experience with impressive scholarship. They give us six introductory chapters on Classification, Plumage & Molt, Breeding, Feeding, Migration & Dispersal and Conservation, followed by the 61 species accounts, covering distribution, migrations, habitat, identification and behaviour. The form of the book dictates the length of these sections (usually between two and three pages) so that information on well-studied species is compressed, while for the little-known ones (such as the Zigzag Heron, which has rarely been seen alive) even the addition of fascinating material on history and taxonomy barely suffices to fill the allotted space. This entails some loss: for example, population numbers and trends are covered generally under Conservation (the slaughter of many herons for the plumage trade was a potent factor in the development of bird protection societies), but not in any detail. The maps are the most disappointing feature in such a superb production, covering little over one-third of the species and with only one page of four in colour. Despite these quibbles, this is a fine work which many will feel is worth the considerable expense, though it will be beyond the reach of most heron enthusiasts who might be able to attempt the in-depth field studies needed, the authors tell us, for no less than 43 species in the family.

STANLEY CRAMP

What's That Bird? A guide to British birds. By Peter Hayman and

Michael Everett. RSPB, Sandy, 1978. 33 pages; numerous colour paintings. £1.25 (£1.00 to RSPB members; free to anyone joining the RSPB).

This very interesting little booklet deals with the majority, but not all, of the common British species: the most notable absentees are Sand Martin and Redpoll, but there are many more. It is quite obviously aimed at the beginner, to whom it should appeal. Technically, I found it hard to fault: there are obviously some small errors, but, on the whole, it is successful and the concept and format are rather original.

The layout is very appealing, particularly Peter Hayman's portrayal of most birds in the attitudes in which they are likely to be encountered. I did, however, find the lack of scale on most pages rather distracting, and the beginner could find it most misleading to have no indication of the size of each species.

Many readers may find the thumbnail sketches too small, but even the smallest—and some are tiny—are of value, and, beside each illustration, Michael Everett's short texts point out the salient features.

Basically, this is a good, cheap introduction to birdwatching, well worth investing in for those new to the hobby. The brief introduction and guide to helpful reference books and records are additional useful features. I should like to see a similar guide to rarer species: perhaps there will be a sequel?

D. J. HOLMAN

The Gannet. By **Bryan Nelson.** T. & A. D. Poyser, Berkhamsted, 1978. 336 pages; 32 pages of black-and-white plates; 32 tables; many line-drawings. £8.00.

I thoroughly enjoyed reading this book. It is full of facts and ideas, beautifully illustrated with relevant diagrams by John Busby and appropriate black-and-white plates, and is presented in an interesting and at times even racy style. Bryan Nelson has been studying the Gannet on the Bass Rock for more than 20 years and has published a large number of papers on his findings, mainly in the fields of behaviour and ecology. He says in the preface that writing this book has given him a great deal of pleasure, since it has provided an opportunity to bring together and integrate the large amount of information that he has accumulated himself and which others studying the same species and related species elsewhere have published over the years. This he has done well. The main chapters cover the structure of the Gannet, its numbers and distribution (all colonies are described in detail), breeding behaviour and ecology. There is a short and challenging chapter on the Gannet at sea, and an attempt briefly to compare the biology of the Gannet with other Pelecaniformes and other members of the Sulidae (a study which is developed in full in his recent book on the Sulidae). Finally, there is a chapter on 'The Gannet and Man', 30 tables of basic data and a bibliography of about 150 references.

The book is authoritative and scientifically sound, but eminently readable. The clamour of a large colony in uproar is likened to 'the contagious fever of a football crowd. No wonder it gives the old hormones a stir.' He describes the basic harsh call as 'as powerful and uncompromising as the bird, all vigour and sharp edges'. There is a great deal of detailed information admirably brought together, and each of the main chapters has a detailed itemised summary, that on breeding behaviour being intriguingly associated with a set of diagrams summarising representative behavioural aspects of the Gannet's life history. Many fascinating biological facts are given and problems posed. For such a long-lived bird (the annual mortality rate is only 6% per annum), it has a remarkably high breeding success, normally of the order of 85%. The bird is capable of raising two chicks, although it can lay only one egg. The population as a whole is expanding, and detailed consideration is given to the history of each of its known colonies. In every way, I regard this as an admirable book, bringing together at a very appropriate time the results of many years' personal work. It provides an assessment of our state of knowledge and understanding from which further work can now be developed. It constitutes an important contribution to ornithological science and literature. It is a pity that the beautiful painting on the jacket is not included in the book.

G. M. DUNNET

Rails of the World: a monograph of the family Rallidae. By **S. Dillon Ripley.** David R. Godine, Boston, 1977. 406 pages; 41 colour paintings by J. Fenwick Lansdowne; 10 black-and-white photographs. \$75.

This is a huge, magnificent book, which is a pleasure to handle. The paper quality, printing standard and colour reproduction are all first-rate. The author recognises 129 species of rails in the world: each is illustrated in colour (but often only one sex, in adult plumage) and slightly under 300 pages are devoted to detailed species-accounts, broken up under each subspecies. After general notes on the species, details are given under the headings 'Description', 'Measurements', 'Weight', 'Distribution', 'Habitat' and 'Status', and sometimes other headings such as 'Captivity', 'Courtship', 'Nest-building'. Thus, the

subheadings are clear and make for easy reference. There are 17 distribution maps, mostly showing details of the distribution of races within one species or of species on oceanic islands and archipelagos. There is a 35-page chapter on fossil Rallidae by Storrs L. Olson, and a detailed 15-page bibliography.

As the author says, 'One of the charms of this family is its enigmatic quality. Rails are provocative because after centuries we know little more about them than did the earliest natural history observers.' On almost every one of the first 30 pages, where topics include the characteristics, distribution, and evolution and speciation of rails, I found fascinating facts which were new to me. There is, for instance, Audubon's description of the 'sport' of killing Clapper Rails in South Carolina; and the function(s) of tail-cocking are discussed: every rail has the characteristic 'jerking' gait. But the fascination of this entire family, apart from the elusiveness of most species, is summed up admirably in one short sentence: 'What a paradox; to fly poorly, to occur so widely, and to evolve flightlessness so easily!'

Rails present an ideal opportunity for a book of this sort. The number of species is sufficiently large to give interest and variety, yet sufficiently few to be covered happily in one volume. S. Dillon Ripley has provided us with what is bound to be the definitive work on this family for very many years to come. This reviewer's only regrets are that the general chapters occupy only 30 pages (and 'Evolution and speciation' only 7½) and that the magnificent paintings by J. F. Lansdowne do not portray the full range of plumages, including both sexes (where different), juveniles and first-years.

J. T. R. SHARROCK

Letters

A symbol for individuals not adult males The present biological symbols ♂ and ♀ indicate the two sexes, male and female. The suggested introduction of a third symbol (*Brit. Birds* 71: 544-545) seems strangely illogical. If the sex is not known, then the absence of a sex symbol would be more appropriate. The question of recording 'autumn' birds is really an issue of plumages, which can be indicated more accurately by letter codes, e.g. 1w/A♀. The Greek letter o, already in use in at least four other disciplines, is typographically inconsistent in any case. KEN OSBORNE

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A symbol or an abbreviation denoting 'not adult male' would undoubtedly have some benefits. The selection of the symbol o for this purpose, however, seems rather unfortunate, since it has long been used with other meanings.

We should, therefore, reconsider the need for such a symbol. In most cases the symbol for 'not adult male' actually means 'female and/or juvenile' or 'female and/or immature'. These meanings can be quite nicely abbreviated with the symbols already in common use: '♀/juv' or '♀/immat', abbreviations that are clear and have the advantage of being internationally understandable while still being fairly short.

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With regard to G. J. Oreel's letter on the proposed use of the symbol o for 'individuals not adult males' (*Brit. Birds* 71: 544-545), I should like to

suggest that *o* could also be used as an abbreviation for 'male or immature' in those—few—species in which the normal roles of the sexes are reversed (e.g. phalaropes *Phalaropus* and Painted Snipe *Rostratula benghalensis*).

M. J. EARP

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These three letters (which have been shortened for publication) were the only ones received on this subject. We interpret this meagre response to the suggested use of *o*, and the absence of letters strongly supporting its adoption, as evidence of a lack of enthusiasm by those involved in bird report compilation for any radical change from the present system. The use of '♀/1st-winter' or, where appropriate, '♀/immature' (and abbreviations of these combinations, such as '♀/1W' and '♀/imm.') seems adequate and unambiguous. Eds

Migration studies in southern Asia The attention of European ornithologists concerned with migration has, not unnaturally, centred around what the late R. E. Moreau termed 'the Palearctic-African Migration System'. Consequently, there is at present a dearth of information about the routes and timing of migration between the Palearctic and the Indian peninsula. In recent years, however, there has been an increasing tendency for European birdwatchers to extend their forays as far east as India, and there appears to be some potential for harnessing this initiative to shed some light on little-known areas of the Palearctic-Indian system.

A considerable amount of work was done in 1970 and 1971 by Oxford University expeditions to Afghanistan and Kashmir. Evidence from these suggested that large numbers of small passerines pass to the west of the Himalayas and then move southeast into India across northern Pakistan. A tremendous amount of useful information on the timing and rate of movement of the migration front on this northwest India route could be obtained if a series of simultaneous observation and ringing camps was set up at selected sites along the supposed pathway to monitor the numbers of birds passing through by standardised techniques. It is important that studies at different localities be carried out in the same season, because the timing of migration varies from year to year.

Probably the best way to obtain approximately compatible results is to rely largely on mist-netting for small passerines, calculating numbers in terms of birds per standard length of net per hour. This has the advantage of not forcing camps to follow the same schedule, although fairly uniform coverage at any one site would obviously be desirable. Information collected systematically at any one locality during the autumn migration period would be of great interest on its own. Pooling the data from several camps would enormously increase their value.

The following localities seem to be the most promising for migration studies:

Eastern Iran (Mashad area, perhaps Torbat Heycdari)

Band-i Amir, Northern Afghanistan

Quetta, Baluchistan

Khyber Pass area or Salt Range (Kala Chita reserve), northwest Pakistan

Northwest Punjab, perhaps Harike Barrage

Lower Sind, perhaps one of the lakes outside Karachi
 Delhi area or Bharatpur sanctuary, Rajasthan
 Gujarat, Bhavanagar area, or perhaps Bombay

I am directing this suggestion primarily at undergraduate groups and other keen amateurs interested in migration studies. Since I have personal experience of most of the areas involved, I should be happy to act as a co-ordinator if sufficient people were interested in taking up the idea. Anyone interested in the possibility of setting up a station during the 1980 migration period is invited to contact me.

TONY GASTON

*c/o Edward Grey Institute, Department of Zoology, South Parks Road,
 Oxford OX1 3PS*

Breeding Bitterns in Britain In their paper on the status of the Bittern *Botaurus stellaris* in Britain, J. C. U.-Day and J. Wilson (*Brit. Birds* 71: 285-300) stated that they could find no cause for the decline in breeding status of this species in Lincolnshire/South Humberside. Being conversant with the area concerned and the status of the Bittern there, I can shed a little light on the situation.

As they stated, the breeding population on South Humberside increased from one presumed pair in the 1940s to a maximum of five or six pairs in the late 1960s. At that time, the available breeding habitat—reedbeds growing in flooded clay-pits—was at a maximum and disturbance was at a minimum. Since 1970, two of the clay-pits where Bitterns bred have been filled and reclaimed, one has been made unsuitable owing to nearby tipping adversely affecting the water level, and another, which once held at least one pair, is now too dry as a result of natural succession. Disturbance has increased several-fold due to (1) the expansion of industrial complexes, such as a fertiliser factory, with associated pollution of two pits, (2) the building of the Humber Bridge, (3) an increase of fishing, with the opening up of previously overgrown pit edges, and (4) water sports. The one or two pairs which have been located in the area in the last three years have all been in the only suitable undisturbed habitat left in the district.

Thus, the future for breeding Bitterns on South Humberside seems very bleak, and the reasons for this are far from obscure. Further, it is disturbing to note that a Bittern was found shot in one of the breeding pits during a recent winter and another was picked up dead during February 1979.

GRAHAM P. CATLEY

Southend, Goxhill, South Humberside DN19 7LT

High altitude flight by swans The flight of swans *Cygnus* at just over 27,000 feet (8,200 m) over western Scotland on 9th December 1967, reported by A. G. Stewart (*Brit. Birds* 71: 459-460), must rank among the highest on record, and it prompted me to investigate the meteorological conditions pertaining at the time.

Both AGS and I consider that the birds must have been Whooper Swans *C. cygnus*, probably on long-distance migration from Iceland. Their altitude excludes the short-distance migrant Mute Swan *C. olor*, and their

position and track reasonably discounts the Bewick's Swan *C. columbianus*, which normally arrives in Britain from the east. Moreover, the Icelandic population of the Whooper Swan is only partially migratory, with emigration taking place at any time during winter. The species is known to fly at great heights (*BWP*, p. 385), although 10,000 feet (3,000 m) is quoted as 'exceptional' by P. Scott *et al.* (1972, *The Swans*). AGS has kindly furnished me with further details to assist me in this short investigation.

Data published in the Meteorological Office *Daily Weather Report* and *Daily Aerological Record* for 9th December 1967 showed a very cold air mass over Britain. If one assumes the flock to have originated in Iceland, upper-level winds along its route suggest a departure after dawn in a building ridge of high pressure, and a subsequent climb through a strong NNW wind flow into the edge of a northerly jet stream, with a total flight time of approximately seven hours. At 8,200 m the swans were in the lower stratosphere and clear of the large snow showers which existed over the sea. Over the Hebrides, the temperature at that altitude was -48°C and the wind northerly at 50 m per second (100 knots). Their ground speed would have decreased rapidly during the period of observation as they descended through a zone of strong wind shear, and the 37 m per second (75 knots) quoted would have been an approximate mean. It is possible that they may have been at an even greater altitude before the observation.

It seems incredible that sustained flight can occur under such physiologically rigorous environmental conditions. The atmospheric pressure at 8,000 m is only one-third of that at the earth's surface, and both air density and oxygen concentration are only 40%. The latter figure is an indication of the efficiency of the avian respiratory system compared with that of man, who normally requires an additional oxygen supply above 4,000-5,000 m (13,000-16,500 feet).

N. ELKINS

10 Oaklands Place, Elgin, Morayshire IV30 2LZ

Birds and thermals Mr Elkins' surprise (*Brit. Birds* 72: 40) at Dr Henty's paper on the soaring of birds in thermal currents (70: 471-475) equalled my own, as I contributed an article to *British Birds* on the subject (48: 241-253), which contains a description of these matters (plus a bibliography); on re-reading, it does not seem to need much, if any, correction, even after 24 years. At the time that I wrote the article, there was still some doubt about the exact method by which thermal bubbles came to be created at ground level: Mr Elkins' letter helps to clarify this.

There can be little doubt that it is the difference in temperature and/or humidity between bodies of adjacent air that creates the necessary buoyancy, and that these can occur no matter what the general level of temperature. I have, for example, witnessed gulls soaring in thermals over London even during the cold weather of February 1979, when the outside air temperature was about 0°C . Convection currents will arise whenever heat is applied from any source and birds seem to be well aware of these currents and to make use of them on any suitable occasion.

G. H. FORSTER

Charlton, Searle Road, Farnham, Surrey

Announcements

YOC cover design competition Members of the Young Ornithologists' Club are again being invited to paint or draw a coloured cover for *British Birds*. The winner last year, with the striking tern design used on the cover of the August issue, was Paul Spencer.

The winning 1979 design will be used on an issue later this year and the artist will also receive a year's subscription to *British Birds* and a copy of *The Atlas of Breeding Birds in Britain and Ireland* (1976), or a book of the winner's choice of equivalent value. Full details of the competition appear in the latest issue of the YOC magazine *Bird Life*.



Young Ornithologists of the Year This annual YOC competition was in 1978 again sponsored by *British Birds*. Entrants had to submit notebooks containing details of three months' fieldwork, had to answer a quiz and had to give an account of their most interesting observation. The competition was divided into three age sections and the winners were as follows: 9 and under, Matthew Tostevin (Wiltshire); 10-12, Glen Brough (South Yorkshire); 13 and over, Mark Welfare (West Sussex). The work of all three winners was notable and maintained the high standard set previously in this competition. Matthew Tostevin's study of Coate Water, near Swindon, included many maps, on which he had plotted his observations. This systematic study showed a remarkably scientific approach for an ornithologist aged only nine years. Glen Brough's notebook was a pleasure to read, since it was very liberally scattered with delightful thumbnail sketches illustrating his observations; the birds were not drawn merely in static poses, but in the attitudes and doing the things which Glen had observed. Mark Welfare's major work was concerned with seawatching from the coast near Shoreham-by-Sea, and consisted of not only the detailed observations but also an analysis of them; he had been involved in the early stages of the observations of the putative Pallid Swift *Apus pallidus* at Stodmarsh, Kent, and of the Greater Sand Plover *Charadrius leschenaultii* at Pagham Harbour, West Sussex. Mark's work, however, showed that he not only has a natural interest in unusual observations, but is also able to gain satisfaction from the study of common birds.



The presentation of the prizes of £60-worth of books and free subscriptions to *British Birds* was made at The Lodge, Sandy, Bedfordshire, on 20th February 1979 (see plate 113). As well as meeting many of the members of the staff of the YOC and the RSPB, touring The Lodge, and seeing a film show, the senior winner also took the opportunity to make it a memorable day by visiting the nearby Wyboston Gravel-pit and



113. YOUNG ORNITHOLOGISTS OF THE YEAR 1978. Left to right, Glen Brough (10-12 age group), Matthew Tostevin (9 and under) and Mark Welfare (13 and over), with JTRS (Michael W. Richards)

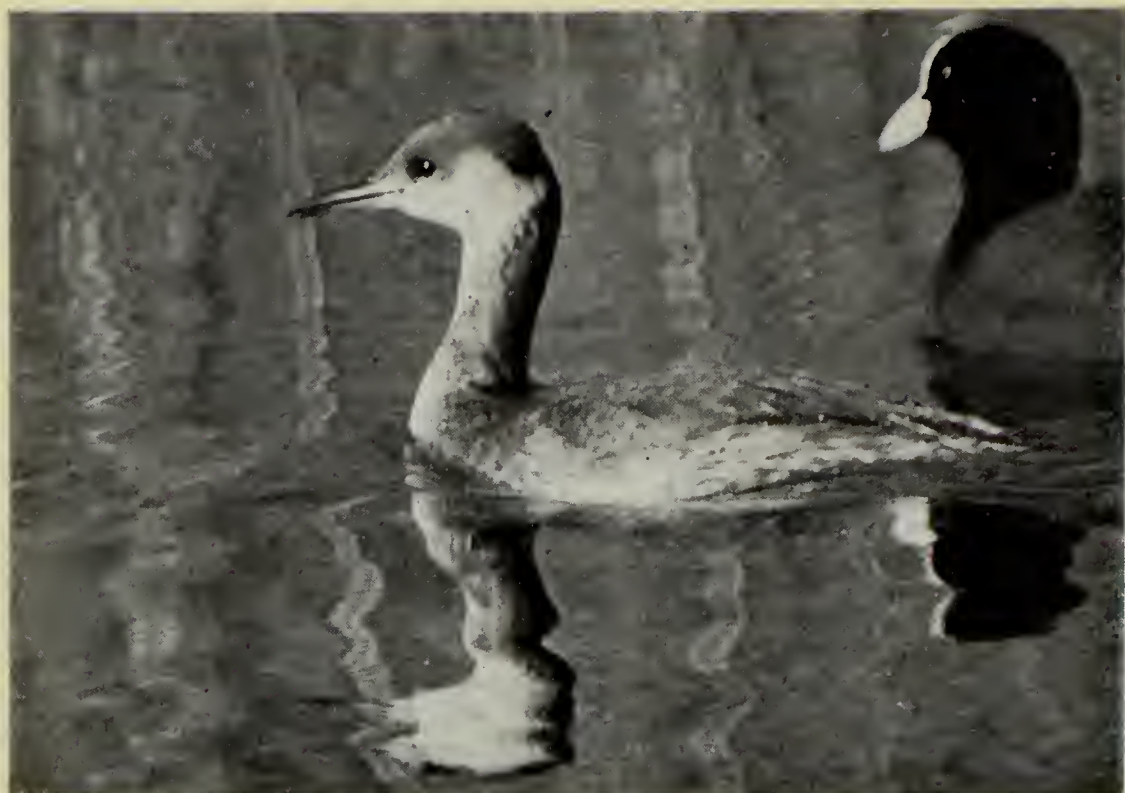
watching Ring-necked Duck *Aythya collaris*, Ferruginous Duck *A. nyroca* and Red-necked Grebe *Podiceps grisegena*.

British Birds is very pleased to be able to help to foster the development of first-rate young ornithologists by this co-operation with the YOC. The journal will again sponsor the competition for Young Ornithologists of the Year in 1979. Details of the competition will appear in the magazine *Bird Life*, which is sent free to all members of the YOC. For details of membership, write to Peter Holden, YOC, The Lodge, Sandy, Bedfordshire SG19 2DL.

Requests

Cyprus A revised checklist of the birds of Cyprus is being prepared, with the full support and assistance of the two Cyprus Ornithological Societies. The compilers request that any unpublished Cyprus records, which will be acknowledged, should be sent to either of them: Peter Flint, 29 Tilney Close, Alton, Hampshire, or Peter Stewart, 10 Digby Road, Evesham, Worcestershire.

Influx of Red-necked Grebes and associated species A widespread influx of the rarer grebes *Podiceps*, particularly Red-necked *P. grisegena*, and various other waterbirds occurred in Britain, apparently over the weekend of 17th-18th February 1979. It is proposed to carry out an analysis of this movement, leading to a paper in *British Birds*. To establish the timing and extent of the influx, all records of Red-necked, Slavonian *P. auritus* and Black-necked Grebes *P. nigricollis* in Britain and Ireland during December 1978



114. Red-necked Grebe *Podiceps grisegena* (and Coot *Fulica atra*), Greater London/Kent, February 1979 (R. J. Chandler)

to March 1979 are requested. Information on other species which seem to have been associated with the influx, such as divers *Gavia*, Velvet Scoters *Melanitta fusca*, Smews *Mergus albellus*, Red-breasted Mergansers *M. serrator* and Goosanders *M. merganser* are also required. All records will be acknowledged; please send full details, including numbers and species involved, locality, dates of first occurrence and length of stay (if known), to Dr R. J. Chandler, 2 Rusland Avenue, Orpington, Kent BR6 8AU.

Viruses of seabirds The Edward Grey Institute and the Unit of Invertebrate Virology^{*} Oxford, are collaborating on a project, supported by the Natural Environment Research Council, entitled 'Viruses of seabirds'. Current work is concentrated on isolating the virus which causes puffinosis of Manx Shearwaters *Puffinus puffinus*, but these studies are now being expanded to include other seabirds. Anyone finding an abnormally high number of seabirds sick for no apparent reason should contact Dr Pat Nuttall immediately at Oxford (0865) 56789 ext. 326 or (0865) 52081/2.

Since isolation of viruses is to be attempted, it is important that sick birds should be collected alive. The EGI/UIV will refund incidental costs incurred and will send someone to the area to collect material.

The majority of viruses associated with seabirds have been isolated from ticks. Live ticks from seabird colonies are therefore also required; they should be sent in screw-cap tubes (which will be supplied on request), clearly marked 'Biological specimens', to Dr P. A. Nuttall, EGI, Zoology Department, South Parks Road, Oxford OX1 3PS.

Colour-marked waders In April, May and June, the Wader Study Group is co-ordinating two special surveys of spring wader passage. The first concerns Siberian Knots *Calidris canutus* and is being organised by William J. A. Dick, 125 Leathwaite Road, London SW11. The second concerns Dunlins *C. alpina*, Sanderlings *C. alba*, Ringed Plovers *Charadrius hiaticula* and Turnstones *Arenaria interpres* and is being organised by Peter N. Ferns, Zoology Department, University College, Cathays Park, Cardiff. Some individuals of the above species will be marked with dye on their necks, and the organisers would be very grateful to receive any sightings (including the colour of each mark, and if possible the number of unmarked individuals also present).

Crested Tit survey During 1979, a survey of the breeding distribution of the Crested Tit *Parus cristatus* is being undertaken. Although much of the fieldwork will be done by local observers, records from other ornithologists visiting the area would be much appreciated. The basic information required is the date, locality (including map reference) and any observations relating to breeding activity. Please send details of any records during the months of April, May and June to M. J. H. Cook, Rowanbrae, Clochan, Buckie, Banffshire.

News and comment

Peter Conder and Mike Everett

Oil The extraction and transport of oil in waters around Britain is now worrying not only the major ornithological organisations—such as the BTO and the RSPB, which in recent issues of *BTO News* and *Birds* have listed the major incidents involving oil tankers and loss of bird life through oil pollution at sea—but also the Shetlanders themselves, who are beginning to see the dangers—forecast by naturalists—resulting from the location of a large oil terminal in Sullom Voe on Mainland. Already, we have seen one accident when 1,160 tons of heavy fuel was spilled in the Voe (*Brit. Birds* 72: 191); that spill, as well as several recent examples of tank-cleaning in Shetland waters, is oiling not only birds, but sheep which feed on the shoreline and are one of Shetland's mainstays for their wool and meat. *Birds* also claims that the flares on rigs and platforms are incinerating many migrant birds on their journeys across the North Sea, since they are attracted like moths to the billowing flames. While oil companies seem to be hardened to the idea of oil-covered beaches, birds and sheep, there are indications that they are somewhat more sensitive to the claim that they may be roasting migrants alive.

The Seabird Group It is obviously the end of an era when no less than six members of the executive committee have retired or resigned, including some who would appear to have given the group a stability when outside observers might have thought that the group was often at sea. It has been a very productive era and it now remains to be seen how a new committee, to be elected after a contest (eight candidates for six places), will reactivate the group.

Its recent bulletin suggests that it has a

good but static membership, with not much to do after the big investigations such as 'Operation Seafarer' which were carried out in the group's early days. It is, however, proposing to gather systematically records of birds seen during ferry crossings and to attempt to institute a standard recording form for observations of birds at sea. And it should not neglect its role, pursued vigorously by the retiring secretary and others, of collecting facts about birds and oil. Incidentally, this bulletin gives no editorial address.

Raptors in Corsica The thirtieth issue of the *Courier du Parc de la Corse* is a special number devoted to birds of prey in Corsica. The first article, by J.-C. Thibault, reviews the status and the numbers of birds of prey in Corsica and reminds us that the islands of the Mediterranean still shelter the rarest of the European birds of prey. The author believes that the activities of photographers, both ciné and still, have been a greater hazard recently to the welfare of some raptors, such as the Lammergeier *Gypaetus barbatus*, than the use of poison baits, egg-collectors or bird-collectors for zoos. That is not to say, however, that, for many eagles, hunters and poisoned baits and, particularly for falcons, pesticides are not a great problem. A total of 25 species of diurnal raptor has been observed in Corsica, of which 11 nest regularly. The second main article is by E. Sailler, on the observations of raptors at artificial feeding stations in Corsica. This issue of *Courier du Parc de la Corse* can be obtained (price 10 francs, excluding postage) from L'Association des Amis de Parc Régional de la Corse, Palais Lantivy, 20000 Ajaccio, Corse.

'Alectoris' It makes you think a bit when an organisation such as the Gibraltar Ornithological Society, which is proud of the fact that its membership has doubled in nine months from 23 to 45, goes on to produce a cyclostyled report of about 45 pages every six months and, in the latest issue, gives, first, a systematic list of birds from 1st January to 30th June 1978, written by Mario Mosquera, followed by a synopsis of raptor and stork migration over Gibraltar in spring 1978. James Finlayson's article on the scope of ornithology on the Rock makes the point that, if it had not been for the closure of the boundary with Spain, it is unlikely that local ornithologists would have paid so much attention to the ornithology of the Rock. He emphasises that even now very little is known about the seabirds that migrate through the Strait, and the nature of their food supply. Finally, Ernst Garcia pays tribute to the late General Sir Gerald Lathbury who, during his tour of duty as Governor from 1965 to 1969, encouraged the great resurgence of interest in ornithology on the Rock.

The Ornithological Society The Malta Ornithological Society has lost the name by which it had become famous since its foundation in 1962. It now has to be known as 'The Ornithological Society'. The latest issue of *Il-Merrill* reports that this change of name has resulted from an Act of Parliament passed in 1978 which controls the use of the words 'Malta', 'Nation' and their derivations. Not every organisation which had previously used these terms was given permission to carry on using them, so the MOS has lost out. Whatever may happen in Malta, the international ornithological fraternity is going to have a taxonomic problem and we are willing to bet that the initials MOS will continue to mean what they have always meant.

The MOS has one consolation in that, after 15 years of hard pressure, the Ghadira Pool on Mellicha has been officially declared a bird sanctuary.

Gold for Guy Congratulations to Guy Mountfort. The World Wildlife Fund has awarded him its Gold Medal 'in recognition of a lifetime's devotion to wildlife and his outstanding leadership in promoting conservation of natural habitat in many countries notably Jordan, Nepal, Pakistan and Spain and especially of his crucial

championship of the tiger which inspired international conservation programmes'.

Birdwatching at Azraq, Jordan

Talking about the achievements of Guy Mountfort reminds us of Jordan and the proposal for an Azraq Desert National Park. Although this proposal has gone the way of the Dodo, two big wildlife reserves have been declared in the Azraq area: the Azraq Desert Reserve of 600 km² and the Azraq Wetland Reserve of about 100 km². One of us has recently been following in Guy's footsteps helping, on behalf of the International Union for the Conservation of Nature and the World Wildlife Fund, both in Pakistan and in Jordan, to prepare management plans for some of the great wetlands that Guy's expeditions highlighted. One tends to think of the Azraq Oasis as a remote spot reached after hours of bumping over desert tracks to a quiet village with the occasional caravan of camels setting out across the desert. We shall not detail the full horrors of the changes of the last three years, except to mention the four-lane highway through the village with juggernauts parked nose to tail in front of the little mosque and the numerous cafes, one of which sells beer and spirits. Anyway, for the birdwatcher, the two Azraq reserves are now within a comfortable two-hour drive of Amman along the good asphalt routes 30 and 50. Car rentals can be arranged easily in Amman, where Shepherd's Hotel (PO Box 2020) is a reasonably priced base to begin one's exploration. Accommodation at Azraq South—once known as Shishan—is possible in the Lodge of the Royal Society for the Conservation of Nature, PO Box 6354, Amman, Jordan, at five Jordan Dinars per night, in twin-bedded bungalows with scalding hot water and light when the generator is on. Food should be brought from Amman, but basic supplies are available in Azraq. Fayk Wazani also runs a four-storey hotel in Azraq, and is used to British ways, having guided virtually all previous expeditions around these parts. Finally, the Ministry of Tourism is building a 50-bed Rest House at Azraq North.

The Boddy and Sparrow Prize

The Council of the BTO has recently revised the rules for the award of the Boddy and Sparrow Prize. In future, the prize will

be awarded for the most deserving piece of personal (not corporate) research described in a paper submitted to *Bird Study* or *Ringing and Migration*. The work and the analysis must have been carried out by one or more amateur biologists or professional ornithologists working in a wholly amateur capacity. The award will be made on the basis of the project and the analysis. All papers submitted in the 12 months to September each year will be considered. The award comprises a certificate, a cheque and a supply of reprints.

Lesser Black-backed Gull Enquiry

Another enquiry concerning Lesser Black-backed Gulls *Larus fuscus* will be organised by Ron Hickling on behalf of the BTO during winter 1979/80. The three principal objectives will be to discover the present numbers wintering inland; to examine the present pattern of migration, as revealed by the counts; and to investigate flocks of non-breeding birds spending the breeding season away from the breeding areas. Ron Hickling (44 Swithland Lane, Rothley, Leicester) suggests that counts should be made at the end of June, the end of September and the end of December, then monthly, at the end of January, February and March. These counts should be made just before dark at roosts, and will be confined to the single species (for which immatures present identification problems).

Provisional New Zealand atlas During 1969-76, 85% of the 3,675 recording squares in New Zealand were visited by observers. This handy, well produced booklet includes maps of bird distribution and also of coverage and the presence of 12 different habitats (beech forest, other native forest, exotic forest, scrub and second growth, developed farmland, and so on), which makes interpretation much easier than it would otherwise be for readers who do not have an intimate knowledge of New Zealand's topography. More than 100 species are mapped. The four-page introduction explains the field-work and mapping methods. It is hoped that the survey will be completed by about 1980. These provisional atlases cost NZ\$10; only a few are available, but anyone with a special interest in New Zealand or in atlas production should

write to Dr Peter Bull, Convener of the Atlas Committee of the Ornithological Society of New Zealand, Ecology Division, Department of Scientific & Industrial Research, Private Bag, Lower Hutt, New Zealand. (JTRS)

'A Guide to Bird-watching in the Isles of Scilly' This 63-page booklet by David Hunt sets out with the clear aim of telling potential visitors to the Isles of Scilly everything that they need to know about the various islands, including access, the best birdwatching places, what they are likely to see and so on. There are clear maps and, at £2.20 (including postage), this is excellent value for money. Even Scilly-regulators will probably wish to purchase a copy. Obtainable from David Hunt, 16 Silver Street, St Mary's, Isles of Scilly TR21 0JG.

'The Birds of Rutland Water' This 45-page report is the first of a series intended to appear biannually. The construction of Rutland Water, Leicestershire, was not completed until early 1975, with water first being pumped in in March. This first report covers birds seen during 1975 and 1976; there are tables of the numbers of waders, terns and wildfowl; breeding bird census results and a ringing report are also included. The speedy utilisation of a new major wetland is the particular interest of this report, which is obtainable (price 75p, plus 12p postage) from its compiler, Tim Appleton, Fishponds Cottage, Stamford Road, Oakham, Rutland, Leicestershire. (JTRS)

Reporting birds in Scotland The annual *Scottish Bird Report* will in future not be appearing in one of the quarterly issues of *Scottish Birds*, but as a separate report published by the Scottish Ornithologists' Club. It will still be supplied free to members of the SOC, but will also be available separately (price £1.25, post free) from the SOC, 21 Regent Terrace, Edinburgh EH7 5BT. Correspondence concerning records should be sent to the editor of the *SBR*: R. H. Dennis, Landberg, Kessock, Inverness IV1 1XD.

New recorder for Cleveland Gordon Follows has now left the area and his successor is John B. Dunnett, 12 The Fleet, Stainsby Hill, Thornaby, Cleveland TS17 9AJ.

... and for Peeblesshire, Roxburghshire and Selkirkshire Roy Murray,

145 Eskhill, Pennicuiek, Lothian, is now the SOC recorder for this area.

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

K. Allsopp and S. C. Madge

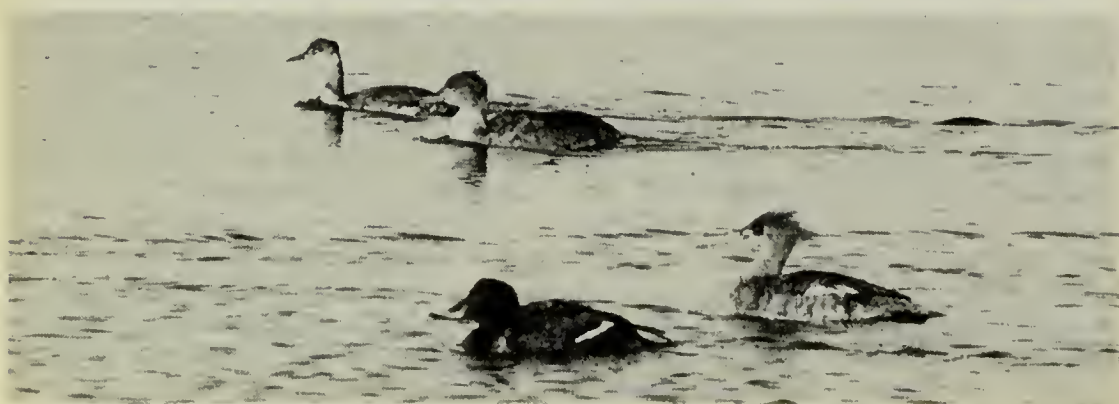
These are largely unchecked reports, not authenticated records

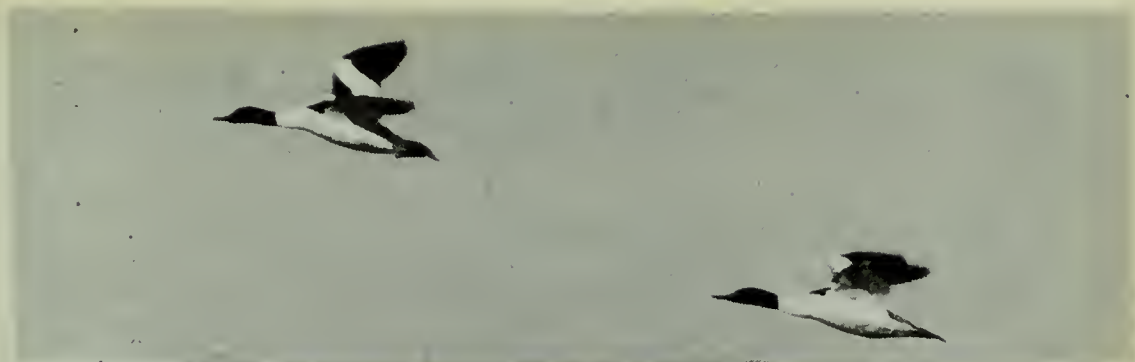
This report covers February, but also includes some January records; except where otherwise stated, all dates refer to February.

A general feature of this winter's weather has been that no particular pattern has dominated for more than a week. Temperatures have been lower than average, frequently staying close to freezing, with a consequent increase in the frequency of snowfalls from the frontal systems crossing the country. In the first 11 days of February, a weak high-pressure region to the northwest brought in cold air from the north and east, diverting the Atlantic depressions to the south and into France. On 14th, an anticyclone developed over northern Scandinavia, and the strong easterly winds on its southern flank brought extremely cold air in from northern Siberia. Daytime temperatures in the Baltic area were down to -15°C , but only down to -2°C by the time the air reached Britain. Having picked up moisture across the North Sea, however, the result was a blizzard that occurred throughout 15th over most of Britain. On the following few days, the centre of pressure moved south into Europe, the winds dropped and temperatures slowly increased as the winds turned to the southeast. From 22nd, comparatively milder air began to come in from the Atlantic, to complete the thaw.

The full effects of the blizzard on the wintering birds cannot be assessed at present, but, with many having been moved on from the worst-hit eastern part of the country by previous cold spells, the effects may have been small. The outstanding species affected was the **Red-necked Grebe** *Podiceps grisegena*, which was found on inland waters throughout the country from 16th. To date, 140 have been reported, mainly in ones or twos, but concentrations included 13 at Rutland Water (Leicestershire) on 18th, ten at Covenham Reservoir (Lincolnshire), six at Draycote Reservoir (Warwickshire) and five at Staines Reservoir (Surrey) on 17th. A total of 80 was estimated to be inland in Lincolnshire by the end of the month. Increased numbers were also reported on the Cornish coast. Information on this influx is being collected by Dr Richard Chandler for a paper in *British Birds* (see 'Request' on pages 241-242). As the severest weather occurred in the Baltic regions, that was the more likely origin of the grebes than the tidal waters of the North Sea. With so many examples of the species to observe, some watchers have commented that few had the head pattern depicted in current book illustrations, especially regarding the amounts of dark coloration on the sides of the head.

115. Red-necked Grebe *Podiceps grisegena*, female or immature Red-breasted Mergansers *Mergus serrator* and first-winter male Velvet Scoter *Melanitta fusca*, Lincolnshire, February 1979 (*Keith Atkin*)





116. Male Goosanders *Mergus merganser*, Lincolnshire, February 1979 (K. Atkin)

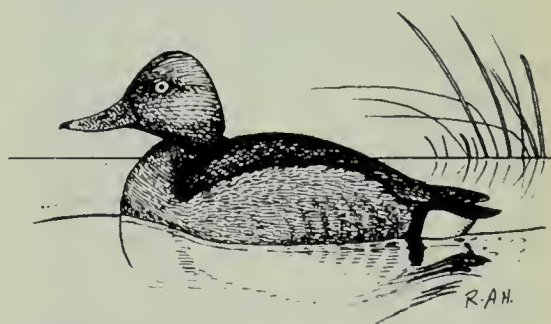
Although **Black-throated Divers** *Gavia arctica* have appeared with increased frequency inland in recent winters, widespread sightings after the blizzard suggest that they too were driven westward from their main Baltic wintering areas. The scattered reports included five on London waters on 17th.

The same pattern of movement might also apply to **Red-breasted Mergansers** *Mergus serrator*, with widespread reports and several flocks of over ten inland.

Other waterfowl

With the weather here and on the Continent disrupting feeding on their usual wintering grounds, many geese appeared in new areas. By the end of February, 2,000 **White-fronts** *Anser albifrons* had settled in Sussex, together with 100 **Pink-feet** *A. brachyrhynchus*, 50 **Bean Geese** *A. fabalis*, 50 **Greylags** *A. anser* and 50 **Barnacles** *Branta leucopsis*. On 27th and 28th January, movements were reported from the London area, with 70 **White-fronts** flying over the Lea Valley (Essex) and several flocks at Staines Reservoir. Totals of 2,000 **Pink-feet** were counted on the Dee Marshes (Cheshire) and 700 over Conway (Gwynedd), with subsequent sightings farther west in Wales. Flocks of around 1,000 were also seen flying over the Lake District (Cumbria) during January, between the Ribble (Lancashire) and Solway wintering grounds. A **Lesser White-fronted Goose** *A. erythropus* was found at Slimbridge (Gloucestershire) on 25th. Swans were apparently affected less strongly by the weather, the only unusual record being a report from Ireland of a **Bewick's Swan** *Cygnus columbianus* of the Nearctic race *C. c. columbianus* colloquially referred to as the 'Whistling Swan'. **Goosanders** *Mergus merganser* moved south and west during January,

London reservoirs holding 300, 60 being noted in Hampshire, a record 81 at Chew Valley Lake (Avon) on 24th and small parties reaching Cornwall; as lakes froze, many moved onto rivers. Single **Velvet Scoters** *Melanitta fusca* were found inland at several places, including Staines Reservoir on 22nd January, Fairburn Ings (North Yorkshire) on 14th, Radnor Mere (Cheshire) on 16th, Gortan Reservoir (Lancashire) and Rutland Water on 18th. There were further reports of Nearctic ducks: **Ring-necked Ducks** *Aythya collaris* at Cheddar Reservoir (Somerset) on 27th to 29th January and Wyboston Gravel-pits (Bedfordshire) on 19th to 21st, **American Wigeon** *Anas americana* at Llyn Bodgylched (Anglesey) on 21st January, and **Black Duck** *A. rubripes* at Aber (Gwynedd) on 11th. A **Ferruginous Duck** *Aythya nyroca* joined the Ring-necked at Wyboston on 20th.



Birds of prey

Of great interest were reports of **White-tailed Eagles** *Haliaeetus albicilla*, one in Ireland and another in Anglesey on 20th, following reports of several from the Netherlands, where there was also a **Pallas's Fish Eagle** *H. leucoryphus*, a species not yet on the British and Irish list. **Rough-legged Buzzards** *Buteo lagopus* were, as usual, reported mainly from southeastern counties, with a further ten records this year; the only other new

reports were from Tetney (Lincolnshire) on 21st January and Bamburgh (Northumberland) on 26th January. Perhaps not wishing to cross the Channel, **Hen Harriers** *Circus cyaneus* collected in southern counties, with 23 at one roost in Kent, 20 estimated to be in Sussex and 15 in Hampshire during January. A bird appropriate to the weather was a **Gyr-falcon** *Falco rusticolus* reported from Benacre (Suffolk) on 26th January. Further reports now indicate that **Short-eared Owls** *Asio flammeus* were common during January, some counties estimating their population at about 50 individuals; inland occurrences were widespread.

Seabirds

Reports so far have not indicated any large movements of gulls during the bad weather. **Glaucous** *Larus hyperboreus* and **Iceland Gulls** *L. glaucoideus* appeared in small numbers, including one Iceland in Kew Gardens (Greater London) on 22nd January; but nowhere were numbers exceptional. There were, however, four more **Ring-billed Gulls** *L. delawarensis*, one at Coatham Marsh (Cleveland) on 19th December, one at Blackpill (Glamorgan) on 23rd, and two in Mounts Bay (Cornwall) in late February. Inland wintering **Mediterranean Gulls** *L. melanocephalus* are still being noted. Three were seen together at Epsom Common (Surrey) on 25th, two at Chew Valley Lake on 24th, one at South Muskham (Nottinghamshire) on 19th January, and two others at Bramshill (Hampshire) and Wrocclesham (Surrey). Two **Grey Phalaropes** *Phalaropus fulicarius* remained inshore at Menai Bridge (Gwynedd) from 4th January for a month, and others were noted at South Shields (Tyne & Wear) on 7th January and at Pont Seton (East Lothian) on 18th. The blizzard brought a number of **Puffins** *Fratercula arctica* inland, as far as Bedfordshire, but perhaps the strangest record was a **Cory's Shearwater** *Calonectris diomedea* seen flying over Staines Reservoirs on 21st.

Wading birds

One species vulnerable to freezing weather is the **Bittern** *Botaurus stellaris*. Of the seven reported from Sussex, three were found dead. The effects of the cold weather on Bitterns are being studied by Colin J. Bibby and John C. U.-Day (see 'Request',

Brit. Birds 72: 190). The 'resident' **Crane** *Grus grus* at Ythan (Grampian) was still surviving in early February and another, an immature, stayed at Scotter (Lincolnshire) throughout the period. Also managing to survive was a **Little Ringed Plover** *Charadrius dubius* at the Point of Air (Clwyd) on 3rd. A rumour that the **Greater Sand Plover** *C. leschenaultii* had been refound in mid January was unfounded, the last reported sighting being at Pagham Harbour (West Sussex) on 1st January.

Bird-brains!

Two unlikely species turned up in the worst of the weather. A **Hoopoe** *Upupa epops* at Newhaven (East Sussex) on 15th and a **Golden Oriole** *Oriolus oriolus* in Friston Forest (East Sussex) on 18th. Also courting disaster, a **Lesser White-throat** *Sylvia curruca* decided to winter in Nottinghamshire, being caught and ringed on 13th January. **Redwings** *Turdus iliacus*, however, passed westwards in high numbers on 30th and 31st January in the south of England and also in North Wales in response to worsening weather. Subsequently, a **Black-throated Thrush** *T. ruficollis* was reported from Bangor (Dyfed) in mid February. An earlier record not reported before was of one in North Staffordshire on 26th November. An interesting record came from Clatteringshaws Loch (Dumfries & Galloway): a **Two-barred Crossbill** *Loxia leucoptera* on 10th; the only other early spring record was from the same county, in February 1968.

The authors wish to apologise for any inconvenience caused by the report (*Brit. Birds* 72: 88) stating that the **Wallcreeper** *Tichodroma muraria* had returned to Cheddar Gorge (Somerset); the information supplied to us was incorrect.

Latest news

In Scilly, during Easter, Great Spotted Cuckoo *Clamator glandarius*, Red-rumped Swallow *Hirundo daurica* and Black-headed Bunting *Emberiza melanocephala*. Elsewhere in April, Song Sparrow *Zonotrichia melodia* on Fair Isle (Shetland) from 17th to 20th; Black Kite *Milvus migrans* at South Ockendon (Essex) on 19th and 20th; Red-footed Falcons *Falco vespertinus* at Lodmoor (Dorset) on 16th and Winterton (Norfolk) on 22nd.

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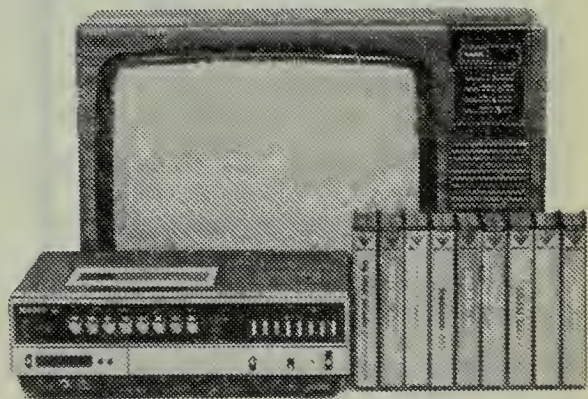
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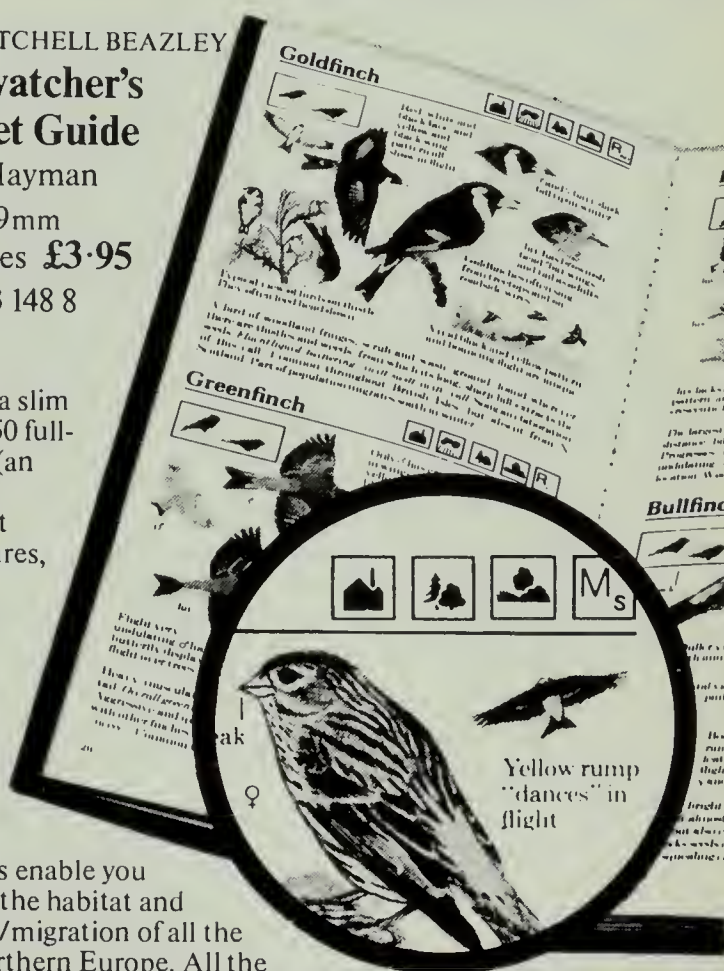
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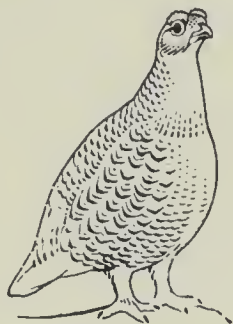
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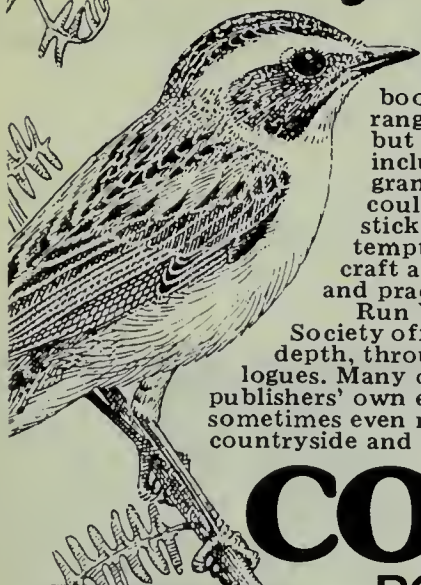
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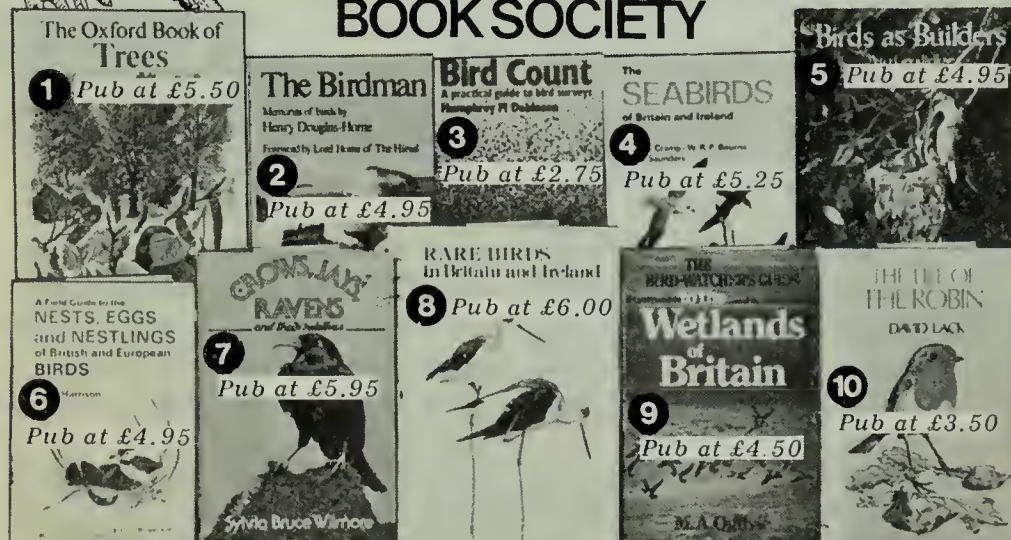
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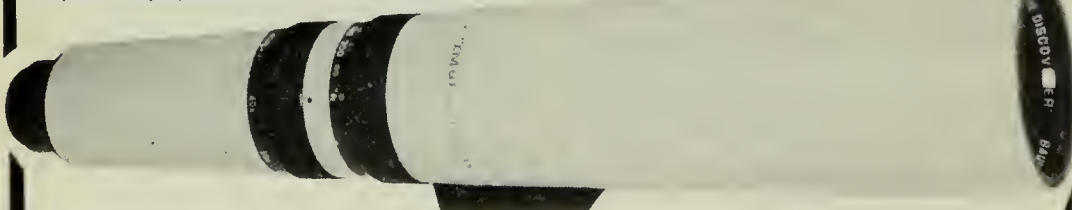
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British Birds

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Bullfinch dispersal and migration in relation to fruit bud damage

D. D. B. Summers

Ringing and observatory records have shown that the Bullfinch—beautiful, but a pest in commercial orchards—has recently become less sedentary



The Bullfinch *Pyrrhula pyrrhula* has been regarded as a pest for centuries, although its economic importance appears to have fluctuated. Throughout much of its range, it is restricted to forests, where it feeds on a variety of seeds and buds. In some areas, it has colonised more open habitats and created a serious problem by feeding on the buds of cultivated trees. The present spate of damage has caused fruit growers much concern since the late 1940s and, following numerous complaints, the Pest Infestation Control Laboratory of the Ministry of Agriculture began to study the ecology of the species in 1954. At that time, many fruit growers believed that the Bullfinches which caused considerable damage in orchards during the winter were immigrants from the Continent. Wright & Summers (1960), however, considered that, on the evidence then available, the damage on fruit farms was done by locally bred birds. Much more information has become available since then and there has also



117. Bullfinches *Pyrrhula pyrrhula* feeding on apple blossom (D. D. B. Summers)

been an apparent change in the incidence of movements of an apparently migratory nature. The objects of this paper are (1) to draw together all available information concerning Bullfinch movements in order to assess whether immigrants are involved in the depredations upon cultivated fruit buds in winter and spring, and (2) to consider other factors associated with annual variations in the extent and timing of bud damage.

Dispersal shown by ringing recoveries up to 1960

Between 1910 and 1960, 7,468 Bullfinches were ringed in Britain and, of those, 185 (2.5%) had been recovered by the end of 1960. The majority of recoveries were less than 5 km from the point of marking (table 1).

During 1956-60, 473 Bullfinches (including 246 nestlings) were ringed in a study area in the Kentish Weald. Ninety-four were subsequently recovered, but only three, all ringed as nestlings, had moved more than 2 km from the point of their release: 2.5 km, 4 km and 5 km respectively. A further 62 individuals were retrapped in the study area, which consisted of about 50% orchards, 20% woodland and 30% mixed crops and pasture. Ninety-two of those recovered had been shot or trapped by fruit growers, and recoveries were, therefore, concentrated in the winter and early spring. The absence of recoveries farther than 5 km from the study area strongly suggests that most individuals remain in the same area for much, perhaps all, of their lives. Furthermore, this study showed that the normal winter foraging range did not exceed 2 km from the ringing site,

Table 1. Ringing recoveries of Bullfinches *Pyrrhula pyrrhula* in Britain before and after 1960

$$\chi^2 = 23.85, P = > 0.001$$

Period	NUMBER OF RECOVERIES						Total
	Under 5 km		5-25 km		Over 25 km		
	No.	%	No.	%	No.	%	
1910-60	172	93.0	12	6.5	1	0.5	185
1961-74	1,063	77.8	233	17.0	71	5.2	1,367

118. Bullfinch *Pyrrhula pyrrhula* feeding on apple blossom (D. D. B. Summers)



and that young birds also rarely exceeded this distance in their initial dispersal.

Dispersal shown by ringing recoveries after 1960

During the period 1st October 1961 to 31st March 1962, 79 ringed Bullfinches were recovered and ten (12.7%) of these were recovered over 25 km from the place of ringing. One ringed in Huntingdon was recovered in Brussels, Belgium, 362 km southeast: this is the longest movement on record. Another, ringed in Kent, was recovered near Versailles, France, 298 km southeast.

During the period 1961-1974, 1,367 ringed Bullfinches were recovered. These showed a significant increase in the number of long-distance movements compared with pre-1960 recoveries (table 1). There were 70 times as many recoveries exceeding 25 km, although the total number of recoveries had risen only sevenfold.

In the 50 years from 1910 to 1960, a total of rather less than 8,000 Bullfinches was ringed, yet ten times this number (over 80,000) were ringed between 1961 and 1974. This increase is largely due to the widespread use since the mid 1950s of mist-nets, which are non-selective and catch all species and age classes of birds so that, when they are used in suitable habitats, Bullfinches are caught without recourse to special techniques. This is not necessarily true for retraps, however, as some species learn to avoid mist-nets (MacArthur & MacArthur 1974). Nowadays, in excess of 95% of Bullfinches ringed are fully grown compared with a mere 26% before 1950.

Mist-nets are probably also responsible for the increase in 'controls' (ringed birds retrapped by another person), which account for about 8% of all recoveries since 1960. The building of many new houses has



119. Bullfinches *Pyrrhula pyrrhula* feeding on apple blossom (D. D. B. Summers)



120. Bullfinches *Pyrrhula pyrrhula* in apple tree (D. D. B. Summers)

apparently resulted in more Bullfinches being picked up dead after flying into window panes. New roads and increased traffic have also resulted in more recoveries due to road casualties. Taken together, these three categories were responsible for 25% of all recoveries since 1960, compared with 8% previously, but the increase in long-distance movements since 1960 remains significant when recoveries in these categories are excluded from the analysis of table 1 ($\chi^2 = 14.42$, $P = < 0.001$). The change in behaviour since 1960 is therefore considered to be real and not an artefact resulting from changes in ringing or recovery methods.

Sight records on passage

Bullfinch sightings at observatories and other coastal watching points in southeast England (Spurn Head, Humberside, to Portland Bill, Dorset) were extracted from the observatory reports and county bird reports for the years 1950-68. The first record during that period was of a single individual at Dungeness, Kent, in November 1952, which was considered very unusual. There were no further reports until January 1955, when singles were seen on two dates at Gibraltar Point, Lincolnshire. Sightings of one or two on four dates in April at Portland Bill were the first records for that observatory. Ones and twos were seen at Spurn Head in October in 1955 and 1956, and four were seen flying south at The Naze, Essex, in October 1957. The next observatory records were of a few at Gibraltar Point in October 1959. In mid January 1960, abnormally large numbers were noted in east Dorset: there were many inland, six or seven at Brands Bay, Poole Harbour, and four at Portland Bill. The following year again produced just a few records of singles.

Bullfinch movements during the autumn of 1961 were very different

121. Length of branch stripped by Bullfinches *Pyrrhula pyrrhula*, only terminal fruit bud left intact (*D. D. B. Summers*)





122. Lord Lambourne apple tree severely damaged by Bullfinches *Pyrrhula pyrrhula* (cf. plate 123) (D. D. B. Summers)

from any recorded previously. Exceptional numbers were recorded at Dungeness, including 35 on 29th October. In Essex, 16 were recorded at The Naze on 17th November, and several on saltings at Hamford Water in December. There were two remarkable southward coasting movements at Minsmere, Suffolk, involving about 50 on 21st October and about 200 on 1st January. Small numbers were recorded on a number of days in autumn at Gibraltar Point and Spurn Head. The early part of

123. Undamaged Lord Lambourne apple tree in full blossom, photographed in same orchard on same day as plate 122 (D. D. B. Summers)





124. Damage by Bullfinches *Pyrrhula pyrrhula* in pear orchard. Two rows in foreground and those to left are favoured variety Dr Jules Guyot: very little blossom remains along whole length of rows. Block to right is Conference, a less favoured variety: Bullfinch damage has started next to hedge and progressed into orchard to depth of six or seven trees (D. D. B. Summers)

1962 also brought exceptional numbers to Dungeness, with a peak of 50 on 1st January. At the same time, ones and twos were seen at four north Kent coastal localities and large increases were reported from the Thanet area, where Bullfinches were normally rarely recorded. Small numbers were seen at Gibraltar Point in all months from January to May, and in spring at Portland Bill and Spurn Head.

During the next five winters, only modest numbers were recorded, with the exception of 20 flying southwest at Gibraltar Point on 31st October 1966. The following winter, 1967/68, again saw a number of movements involving more than usual (e.g. up to 30 at Gibraltar Point at the end of October; 20 moving west at Beachy Head, East Sussex, on 29th October; over 50 moving west at Hythe, Kent, on 9th-11th January). These data indicate that Bullfinches occur irregularly as passage migrants at the coast and are absent in many years. In the autumn of 1961, and the following spring, exceptional numbers were seen at several observation points, but, since the spring of 1962, sightings of Bullfinches on passage have been comparatively sparse, although more regular than previously.

This paucity of sightings of Bullfinches on passage, the small number ringed in Britain and recovered abroad, and Harrison's (1958) failure to find any of Continental origin in a large sample collected in south-eastern England between 1954 and 1957, suggest that the winter population of Bullfinches frequenting orchards in southeast England is not of Continental origin.

Direction of movements shown by ringing

Recoveries less than 5 km from the place of ringing are referred to as 'local' by the Ringing Office, and the direction of movement is recorded only when displacement exceeds 5 km. Because the evidence derived from the intensive study of Bullfinches in the Kentish Weald suggests that movements in excess of 5 km are exceptional, the author has felt justified in including all such movements in the analyses to determine the nature and direction of the migratory movements of Bullfinches. Records were selected where the movement recorded could be associated with a particular year: recoveries only of those birds which were ringed during the summer months (1st April to 30th September) and recovered during the following winter (1st October to 31st March), or ringed during winter and recovered later the same winter, were used. Furthermore only those in which the age of the bird was known or could be deduced were used in the analysis.

The mean direction of movement was calculated by considering each recovery as a unit vector and summing the components. The Rayleigh test has been used here to determine whether the mean directions observed were significantly different from random. This treatment of circular distributions and periodic functions is considered at length by Batschelet (1965).

A total of 112 recoveries was available for the analysis of direction of movements. The mean direction taken was 164° (SSE), but there was no significant departure from randomness ($z = 0.91$). Considering only those recovered at distances in excess of 25 km, the mean direction of displacement was 153° (southeast) (see fig. 1). Twelve first-years recovered over 25 km had a mean direction of 182° (south), but this was not significant (fig. 2). Nineteen adults, however, had a significant mean direction of 144° (southeast) (fig. 3). Recoveries of a small sample ringed in winter and recovered the following summer suggest a return spring movement comparable to annual migration: for nine birds recovered over 25 km, the significant mean direction was 340° (NNW) (fig. 4).

Details of 92 non-local recoveries of individuals which had been sexed and aged and could be associated with autumn or winter movements showed that more first-years than adults were involved, and more males than females (table 2).

Annual fluctuations of winter food supplies

Several authors (e.g. Svårdson 1957, Perrins 1966) have investigated the relationships between the movements of irruptive species and the cycles

Table 2. Age and sex differences in autumn and winter movements of Bullfinches *Pyrrhula pyrrhula* in Britain as shown by ringing
Under 'BOTH SEXES', '1st-w' includes unsexed juveniles

Distance recovered (km)	ADULT			1ST-WINTER			ALL AGES			BOTH SEXES		
	♂	♀	Ratio	♂	♀	Ratio	♂	♀	Ratio	1st-w	Ad	Ratio
5-25	13	11	1.2:1	21	14	1.5:1	34	25	1.4:1	41	24	1.7:1
> 25	4	7	0.6:1	9	4	2.3:1	13	11	1.2:1	16	11	1.5:1
All distances	17	18	0.9:1	30	18	1.7:1	47	36	1.3:1	57	35	1.6:1

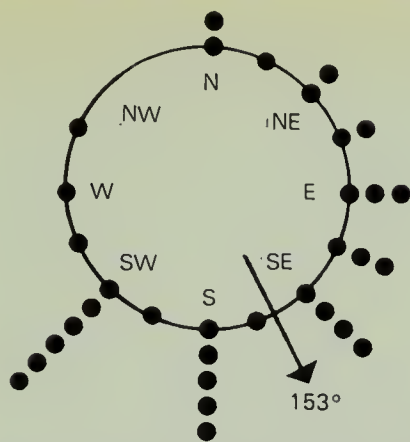


Fig. 1. Directions taken by Bullfinches *Pyrrhula pyrrhula* recovered in winter more than 25 km from point of ringing. Each dot represents one recovery. Arrow shows mean direction. $z = 3.81$; $P < 0.05$, $n = 33$

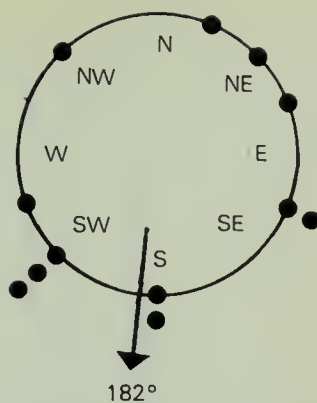


Fig. 2. Directions taken by young Bullfinches *Pyrrhula pyrrhula* ringed and recovered in their first winter more than 25 km from point of ringing. Each dot represents one recovery. Arrow shows mean direction. $z = 0.69$; $P = 0.05$; $n = 12$

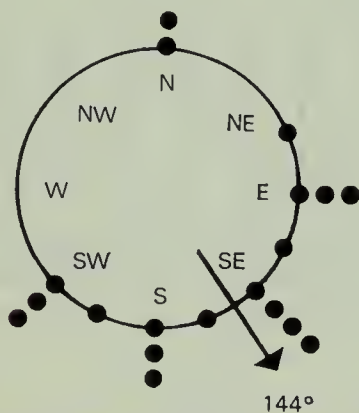


Fig. 3. Directions taken by adult Bullfinches *Pyrrhula pyrrhula* recovered in winter over 25 km from point of ringing. Each dot represents one recovery. Arrow shows mean direction. $z = 4.82$; $P < 0.01$; $n = 19$

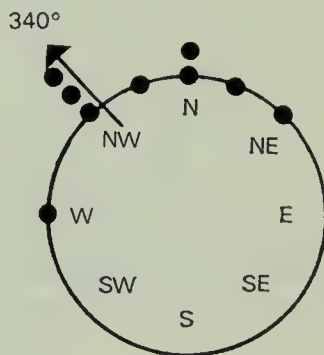


Fig. 4. Directions taken by Bullfinches *Pyrrhula pyrrhula* ringed in winter and recovered over 25 km away the following summer. Each dot represents one recovery. Arrow shows mean direction. $z = 5.60$; $P < 0.01$; $n = 9$

of fruiting of various trees, particularly spruce *Picea* and beech *Fagus*. In autumn, Bullfinches feed largely on the seeds of herbaceous plants; these decrease in importance with the onset of winter and are replaced in the diet by tree seeds and finally, in spring, by fruit buds (Summers 1962, Newton 1967).

The seeds of ash *Fraxinus excelsior* are important in the Bullfinch's diet, and this species of tree shows marked annual crop-bearing fluctuations. Comprehensive records of ash-seed production are not available for Britain, but Hyde (1963) has established a satisfactory correlation between pollen fall and seed crop. Fig. 5 shows the annual ash-pollen fall for the 14 years 1959-72, and, if this is compared with the records of Bullfinch sightings at observatories (appendix 1), it will be apparent that the greatest numbers were seen in years when the predicted ash crop was low.

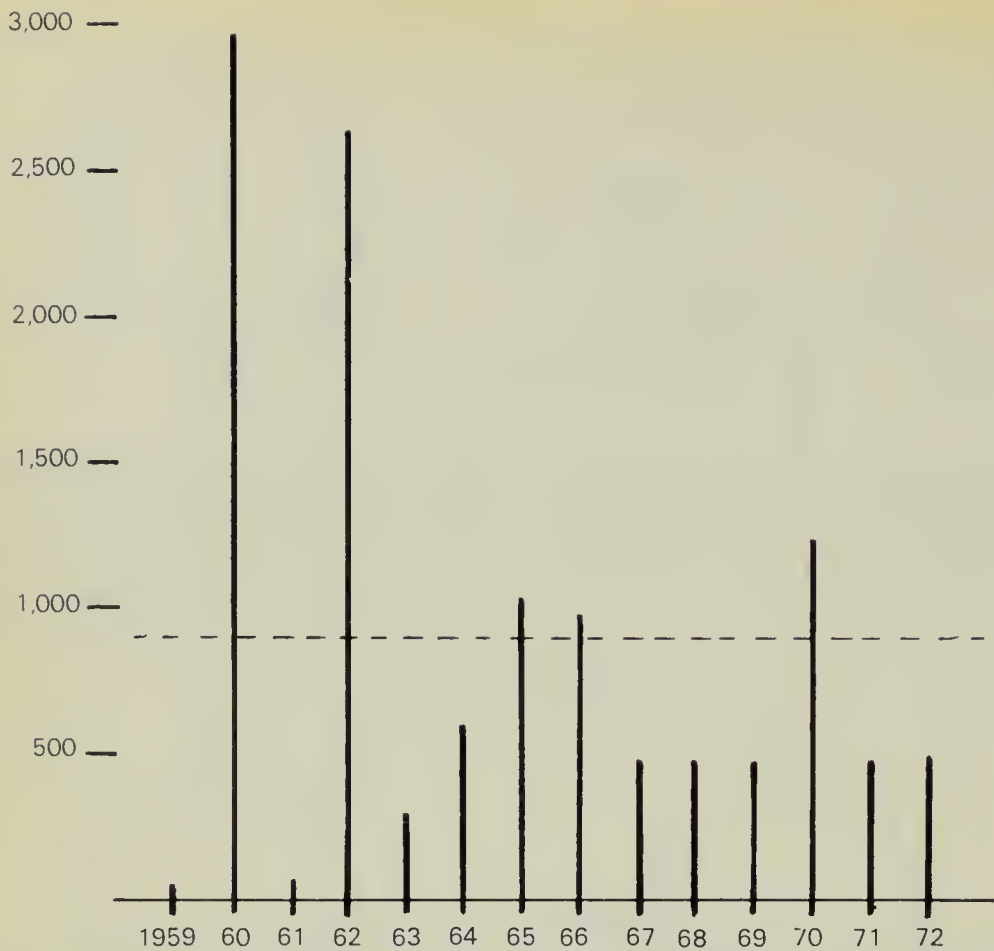


Fig. 5. Potential crop fluctuations of ash *Fraxinus excelsior* (total pollen grains deposited on 5 cm² during the year) during 1959-72 (after Hyde 1963 and *in litt.*). Dotted line shows average level

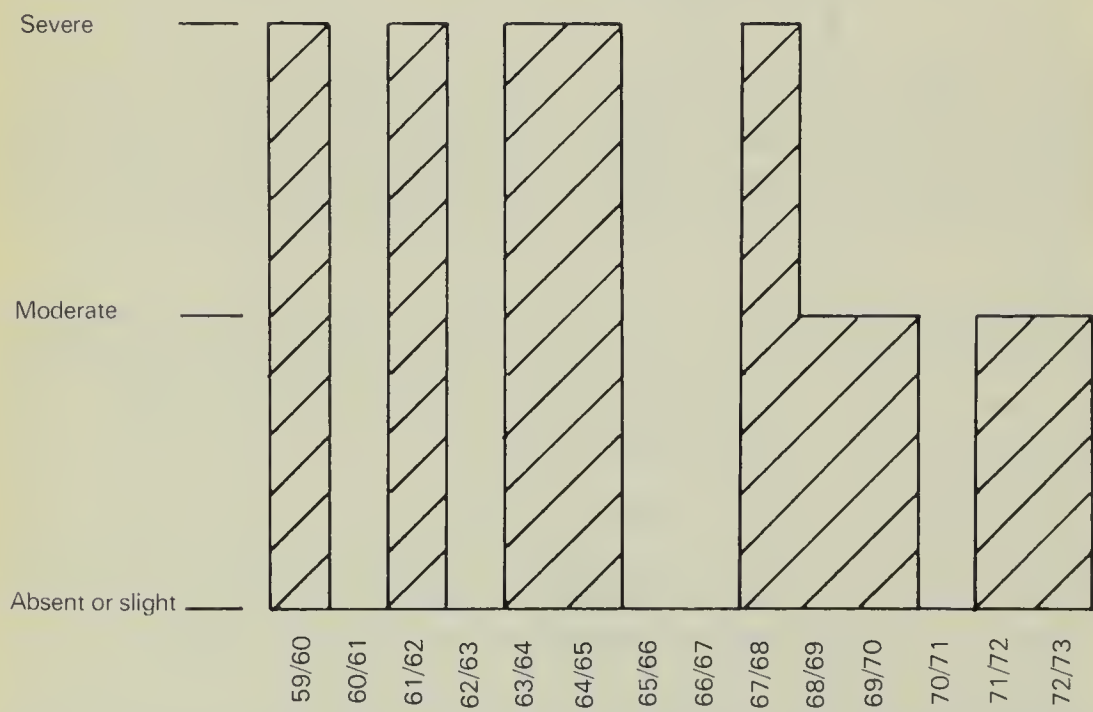


Fig. 6. Estimates of damage by Bullfinches *Pyrrhula pyrrhula* to fruit buds in commercial orchards during 1959/60 to 1972/73, based on visual assessments and some measurements (see Summers & Jones 1976)

An even better relationship can be seen between the predicted abundance of ash seeds and the extent of bud damage in orchards; fig. 6 shows the general assessments of Bullfinch damage in orchards in the period under consideration. These assessments are based on my own observations in the field and on the reports of other officers of the Ministry of Agriculture, together with a number of measurements of damage (see Summers & Jones 1976 for method).

Discussion

The information on ringing recoveries and visible migration reported here support the conclusion drawn earlier by Wright & Summers (1960) that damage on fruit farms is caused chiefly by local Bullfinches; the increase in the migratory activities of a small proportion of the British Bullfinch population which has taken place since 1960 does not invalidate this. A similar conclusion was reached by Aubry (1970), who considered that damage to orchards in the east, southeast and southwest of France was also caused by local Bullfinches.

Bullfinch movements appear to resemble migration of the invasion type, which is undertaken irregularly by many northern species to escape food shortage in a particular year, rather than annual migration undertaken to escape food shortage in a particular season. Clearly, an irruption of Bullfinches took place at the end of 1961 (see appendix 1). From the beginning of October 1961 through to early May 1962, 14 Bullfinches were recovered over 25 km from the point of ringing, including the only two foreign recoveries of Bullfinches ringed in Britain. There had been only one previous recovery in excess of 25 km, but several long distance recoveries have been reported each year since.

Svårdson (1957) suggested that the more extreme examples of irruptive species of birds in northern Europe showed a 'pendulum' pattern of movements, birds moving eastwards or westwards once a year after breeding. The following year, they bred in the new location, and then moved again in the opposite direction. Ulfstrand (1963) criticised this theory and suggested that such species undertake a circular tour, which starts as a westerly movement and eventually becomes southwesterly to southerly, guided by the coastline of western Europe. Eventually, the birds find themselves far south of their normal breeding latitudes in spring and move east or northeast.

Sapatina (1962) considered that Bullfinches in Russia migrated in a standard direction in autumn and returned in spring. He also thought that two separate populations may have been involved in autumn migration in northern Europe, travelling in different directions. Bullfinches from the northern and central regions of European Russia and from the Altai region migrated mainly southwest in autumn, while those from Sweden, Finland and possibly the Baltic Republics migrated southeast.

If either a 'pendulum' or 'circular tour' type of migration were undertaken by Bullfinches in Britain, their direction of movement would not be the same in all years. The available information does not indicate alternating directions in Bullfinch movements in different years, although



125. Damage by Bullfinches *Pyrrhula pyrrhula* in pear orchard. Right hand row of variety Doyenné du Comice is untouched; main block of variety Conference shows progressively less damage (more blossom) away from hedgerow (camera position). Block of variety Dr Jules Guyot, just visible at top left, is severely damaged right through orchard (D. D. B. Summers)

it is insufficient to refute such a situation, but there is some evidence to support a standard southeasterly emigration, with a corresponding return in spring (figs. 1 & 4).

Svårdson (1957) stated that, in species undertaking annual or invasion type migration, young birds and females show the greatest participation when the whole population is not involved. The above evidence regarding British Bullfinches does not entirely support this view. Many of the Bullfinches recovered in the Kentish study area were shot or trapped by fruit growers and this is known to result in a bias towards young birds and males (Summers 1968). Any bias due to mode of recovery would therefore be expected to be greatest in respect of local and short distance recoveries; genuine migration movements over longer distances being less likely to be affected. Since such a bias favours males, the greater proportion of recoveries of adult females (table 2) probably represents a real difference. Since the natural juvenile to adult ratio in winter Bullfinch populations is approximately 5 : 2 (Newton 1968, Summers 1968), the small difference between recoveries of young birds and adults suggests that relatively more adults than young birds participate in migration. These results do not, therefore, entirely support Svårdson's (1957) hypothesis, but the accuracy with which the Bullfinches were aged must be questioned; although it is easy to distinguish those in juvenile plumage, first-winter birds, particularly females, are much more difficult to identify.

The duration of feeding on any type of food depends to some extent upon its abundance and persistence. When seeds are scarce, Bullfinches start eating buds early in winter and this, in turn, may result in severe



126. Damage by Bullfinches *Pyrrhula pyrrhula* to apple trees, showing progressively less damage (more blossom) away from the hedgerow (towards camera) (D. D. B. Summers)

and extensive damage in orchards. The five years when ash-pollen fall was above average (fig. 5), and the subsequent seed crop was expected to be high, correspond exactly with the years when Bullfinch damage in orchards (fig. 6) was low, and vice versa. Although pollen fall appeared similar in 1967, 1968 and 1969, damage assessments were different in each year. The ash seed available during 1967-68 was less than indicated by the pollen fall, due to a wet spring and late frosts in May, producing poor pollination and set. According to the Common Birds Census data (Batten 1969), Bullfinches were less abundant in 1968 than in 1967, the difference being significant in farmland populations.

During the three winters when most movement was observed (1961/62, 1964/65 and 1967/68), Bullfinches did a large amount of damage in orchards (fig. 6), and in 1965 the CBC index value for Bullfinches reached the highest level since the census began. The predicted ash-seed crop was below average in all three years. Newton (1964) observed a winter population decline of 67% in woodland in 1963/64 when ash seed was unavailable, compared with 33% in the previous winter when ash seed was plentiful. At Wicken Fen, Cambridgeshire, Bibby (1973) recorded a high mortality of 77% in 1969/70 when ash-pollen fall was below average, and a low mortality of 34% in 1970/71 when ash seed was abundant.

Acknowledgements

I am grateful to the BTO Ringing and Migration Committee and staff for allowing access to ringing recoveries and help when consulting them. Dr H. A. Hyde, late of the Asthma and Allergy Research Unit, St David's Hospital, Cardiff, generously supplied me with the ash-pollen counts. R. E. Scott and M. Davenport extracted information from the Dungness and Sandwich Bay Bird Observatory records. I also wish to thank the numerous fruit growers who allowed me to ring and release Bullfinches in their orchards and

assess levels of bud damage. Robert Spencer, E. N. Wright and C. J. Feare read the manuscript and made helpful suggestions.

Summary

Bullfinches *Pyrrhula pyrrhula* ringed during a study in the Weald of Kent between 1956 and 1960 were highly sedentary, the longest movement recorded being only 5 km. Of all the ringed Bullfinches recovered in Britain during 1910-60 only one was recovered more than 25 km from the point of ringing. The absence of sight records at bird observatories, and taxonomic evidence from studies of Bullfinches shot by fruit growers, support the conclusion that the resident Bullfinch population was sedentary during that period and that there was no immigration. During winter 1961/62, and in subsequent years, a small proportion of the Bullfinch population showed irruptive tendencies. The mean direction of movements was southeasterly, young birds taking a more southerly direction than adults. There was, however, a large scatter, and recoveries were recorded from most cardinal points.

Annual fluctuations in the amounts of damage occurring in orchards are linked with the availability of natural food supplies, especially seeds of ash *Fraxinus excelsior*. The three winters when most movements took place corresponded with high damage in orchards and low production of ash seed.

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Appendix 1. Records of sightings of Bullfinches *Pyrrhula pyrrhula* at two coastal bird observatories in southeast England

At Dungeness, two overwintered in 1967/68; at Sandwich Bay, two or three recorded on most days 22nd December to 8th March, up to three probably remained in area: in both cases, these birds are excluded.

a. DUNGENESS, KENT

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	TOTAL
1950/51								0
1951/52								0
1952/53		1						1
1953/54								0
1954/55	4	13						17
1955/56								0
1956/57								0
1957/58	3	12	2					17
1958/59								0
1959/60	5	1				3	5	14
1960/61	3							3
1961/62	46	16	2	300	60		7	431
1962/63			1					1
1963/64	9	9	1	3	1	2	2	27
1964/65	16	1						17
1965/66	2		3	3	1	1	1	11
1966/67	1		1	2		2		6
1967/68	38	6		3		1	1	49
1968/69	1			1		1		3
1969/70		2						2

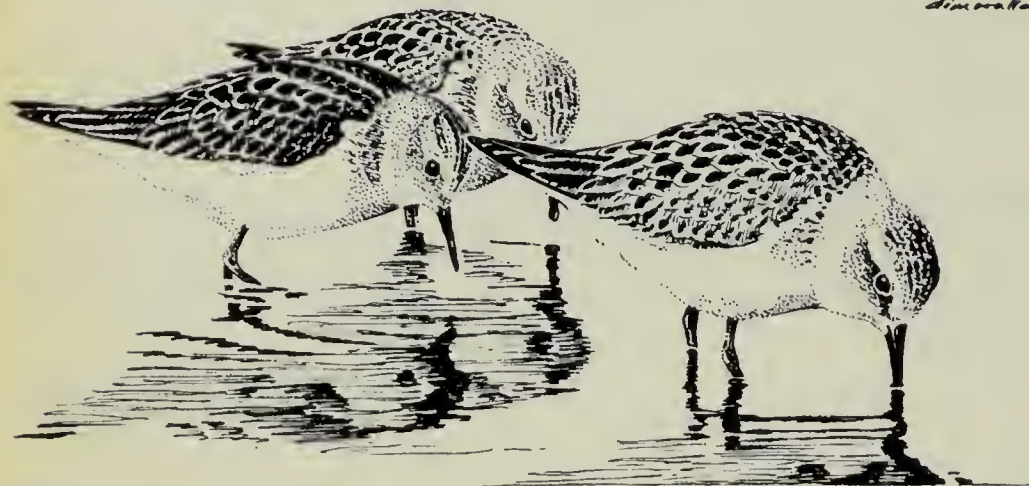
b. SANDWICH BAY, KENT

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	TOTAL
1959/60								0
1960/61								0
1961/62	13	10					6	29
1962/63	3	3						6
1963/64	8	22	5	7			1	43
1964/65	5	4	1			1	4	15
1965/66	6	1	6	2	2	1	2	20
1966/67	12	5	6	1		5	2	31
1967/68	19	15	1		1	3	4	43

Review of British records of Semipalmated Sandpipers and claimed Red-necked Stints

D. I. M. Wallace, on behalf of the Rarities Committee

dim Wallace 79



The opening paragraphs of my paper on the field identification of small stints and peeps in the genus *Calidris* (Wallace 1974) stressed that the problems set by an odd stint are likely to be severe and often compound. The clouds surrounding the separation of the Nearctic vagrant Semipalmated Sandpiper *C. pusilla* from the common Palearctic migrant Little Stint *C. minuta* have, however, lifted in recent years, as more and more observers have gained experience of small *Calidris* on both sides of the Atlantic. Drawing upon this increased familiarity, the Rarities Committee completed in May 1978 an exhaustive review of all published British records of the Semipalmated Sandpiper (dating from 1953) and coupled to this an examination of four claims of the eastern Palearctic Red-necked Stint *C. ruficollis* (dating from 1973). The Irish Records Panel is currently engaged in a similar review of all records of Semipalmated Sandpipers in Ireland.

This paper presents the results of the review of British records, together with the reasons for the Committee's changed opinions on those which previously were accepted but which now are rejected. In all such cases, the records were submitted and accepted in good faith, but both the identifications and their acceptance were based on criteria which, since 1974, have been shown to be unreliable. It should be noted that past rejected records of Semipalmated Sandpiper have not been reviewed, but, if observers feel that particular records still have a strong case for acceptance, they are urged to request reconsideration.

Semipalmated Sandpiper

REVIEW FINDINGS

Between 1953 and 1974, there were 12 published records. The Committee

now regards five as acceptable and seven as unacceptable, including one withdrawn by the observer before the review.

Past published records still accepted

Norfolk 1953 Cley, worn summer adult beginning to moult to winter plumage, 19th July (*Brit. Birds* 47: 131-132, plates 27-28).

Dyfed 1964 Skokholm, worn summer adult trapped, 21st July (*Brit. Birds* 58: 218-219).

Devon 1966 Lundy, juvenile trapped in company with a Least Sandpiper *C. minutilla*, 8th September (*Lundy Field Soc. Rep.* 17: 20-21; *Brit. Birds* 60: 319).

Lincolnshire/Norfolk 1966 Wisbech Sewage-farm, apparent first-winter, trapped, 12th November (not 9th October as previously published) to 26th December (*Brit. Birds* 60: 319).

Isles of Scilly 1970 Tresco, juvenile, 27th September (*Brit. Birds* 67: 341).

Past published records now withdrawn or no longer accepted

Fife 1957 Isle of May, 19th September (*Scot. Birds* 1: 35-37). Although this bird showed a slightly swollen tip to its bill, the description of its upperparts does not indicate Semipalmated. The most noticeable plumage character was a 'very conspicuous V meeting on the rump'. This points strongly to Little Stint in juvenile plumage, and the rest of the description suggests a rather dark example of that species.

Kent 1965 Dungeness, 6th to 9th September (*Brit. Birds* 59: 289, 543-547, plate 79). The identification of this bird has caused a decade of confusion. From one photograph, it was found that its feet were unwebbed. It is to the credit of the late R. C. Homes that he always stood out against the original identifications; at least two of the other observers concerned have since shared his doubts. One of them and the majority of the Committee are satisfied that it was a juvenile Little Stint, but there lurks a fear in some minds (including mine) that it may have been a juvenile Red-necked. It is portrayed in plates 127-129.

Kent 1967 Sevenoaks, 10th September (*Kent Bird Rep. for 1967*; *Brit. Birds* 61: 342). The original identification stemmed directly from that of the 1965 Dungeness bird, the confusion surrounding the latter affecting the observers and the Committee. As shown by several photographs (e.g. plates 130 & 131), the bill was finely tipped, the back stripes were strongly marked and the feet were unwebbed. The call was transcribed as 'peep'. The Committee is now convinced that this bird was a juvenile Little Stint.

Gloucestershire 1968 New Grounds, Slimbridge, 13th October (*Brit. Birds* 62: 470). Since no webs were seen, nor any call heard, this record was withdrawn by the observer when the full complexities of stint identification became evident.

Isles of Scilly 1969 Tresco, 19th August (*Brit. Birds* 63: 277). This bird was an adult in worn summer plumage. The balance of opinions within the Committee is that it was a short-billed Western Sandpiper *C. mauri*, but, as transcribed, the call points to Semipalmated. Sadly, it must remain indeterminate.

Suffolk 1971 Minsmere, 3rd to 8th September (*Brit. Birds* 65: 334). One of the observers concerned now feels that no certain claim for this bird can be upheld. The Committee is not convinced that a misidentification occurred, but, since no webs were seen and the bill shape was inadequately described, the bird must be regarded as indeterminate.

Essex 1974 Barking, 4th May (*Brit. Birds* 68: 318). Again, the Committee is not convinced that a misidentification occurred, but it does feel that, since this is the only spring record, absolute proof is required. The lack of any call hampers assessment of this record.

IDENTIFICATION

It remains to summarise those characters of Semipalmated Sandpiper which are now considered reliable and practical in the field, based mainly

on the field experience of a growing number of observers who have studied the species in North America and have been able to make detailed comparisons with Little Stint.

Structure The following points are most important, being valid for individuals of all ages.

SIZE Semipalmated averages slightly larger and more robust than Little Stint.

BILL SHAPE Blunt-tipped in profile and slightly spatulate at the tip (blob-ended when viewed head-on at close range); looks short and stubby on typical indivi-

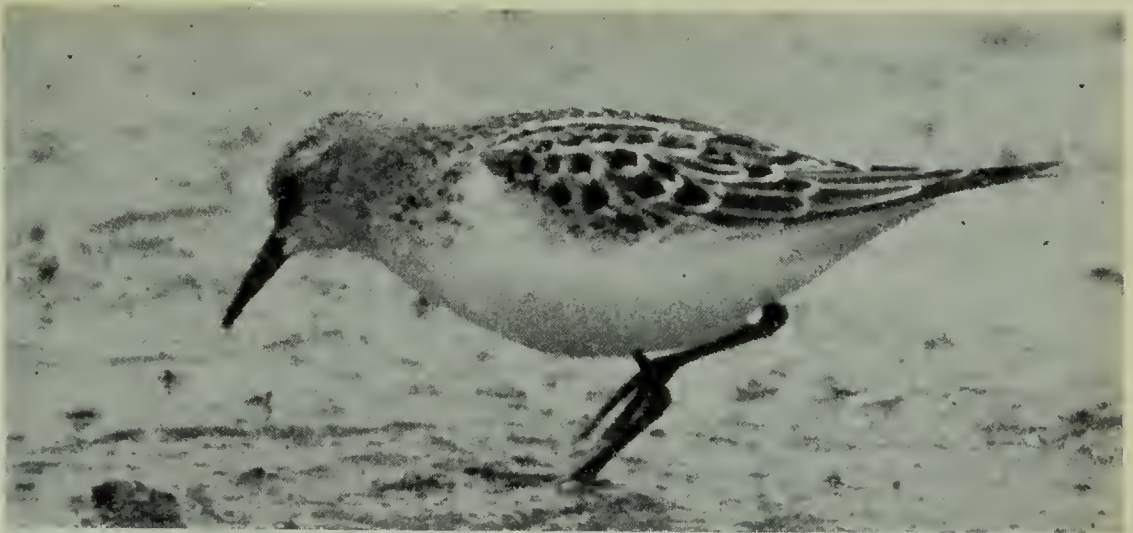
duals, but appears quite long on those breeding in eastern Canada. Bill of Little Stint is longer on average, invariably looking fine-tipped or with only a slight bulb. Perception of the supposed thicker bill-base of Semipalmated is difficult in the field.

FOOT-WEBBING When seen, diagnostic so long as the possibility of Western Sand-



127-129. Juvenile stint *Calidris*, originally identified as Baird's Sandpiper *C. bairdii* and then accepted as Semipalmated Sandpiper *C. pusilla*, but probably either Little *C. minuta* or Red-necked Stint *C. ruficollis* (in plate 129, Dunlin *C. alpina* at left) Dungeness, Kent, September 1965 (Pamela Harrison)





130 & 131. Juvenile Little Stint *Calidris minuta* (previously accepted as Semipalmated Sandpiper *C. pusilla*), Sevenoaks, Kent, September 1967 (Pamela Harrison)

piper (the only other stint with webbed feet) has been eliminated.* Webbing is more extensive between the outer and middle toes than between the inner and middle; it is readily visible on dry habitats, even at long range if a telescope is used. Observation of this feature can be practised by looking for the unwebbed feet of Little Stint and other small waders at every opportunity.

Voice Compared with the sharp, rather high-pitched 'tit' flight call of Little Stint, the lower-pitched, rather harsh, throaty or coarse quality of a typical call from a Semipalmated sounds very different: variously transcribed in field notes as 'chirrup', 'churup', 'chittup', 'chirrt' and 'trrp' (examples from accepted British records), it recalls Pectoral Sandpiper *C. melanotos* to some ears. Shorter, mono-

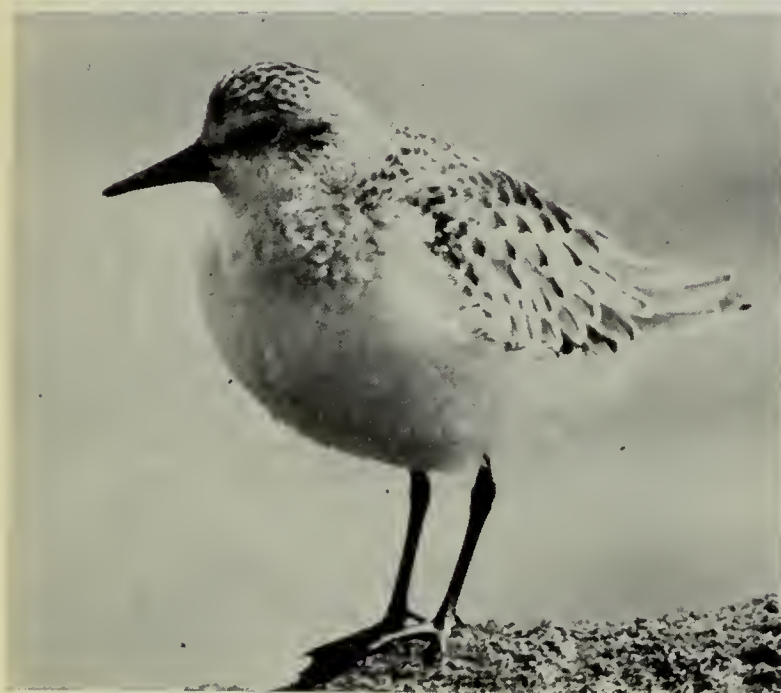
syllabic versions, often repeated in series (as in Little and other stints), and a multisyllabic, whinny-like trill also noted.

Plumage No firm plumage differences from Little Stint have yet been established for summer adult and first-summer plumages (with much confusing variation stemming from wear and bleaching), and winter adult and first-winter (mainly uniform grey above with dark feather centres, like Little Stint). Structural and voice distinctions are thus vital for individuals in these plumages. To experienced eyes, however, the plumage of juvenile Semipalmated does look quite different from that of a typical juvenile Little Stint. Given that all juvenile stints are readily aged as such by the regular pattern of sealing on their upperparts and their fresh, neat appearance, typical Semipal-

* Western Sandpiper is larger, between Little Stint and Dunlin *C. alpina* in size, with longer, Dunlin-shaped bill and longer legs: juveniles and summer adults have strong rufous coloration on crown, ear-coverts and scapulars, often partially retained in winter plumages, especially first-winter. It has the character of a small Dunlin rather than a stint; its calls are high-pitched and penetrating. See Wallace (1974) for detailed discussion of the field characters of Western Sandpiper.



132. Juvenile Semipalmated Sandpiper *Calidris pusilla*, USA, autumn 1961 (James Baird)

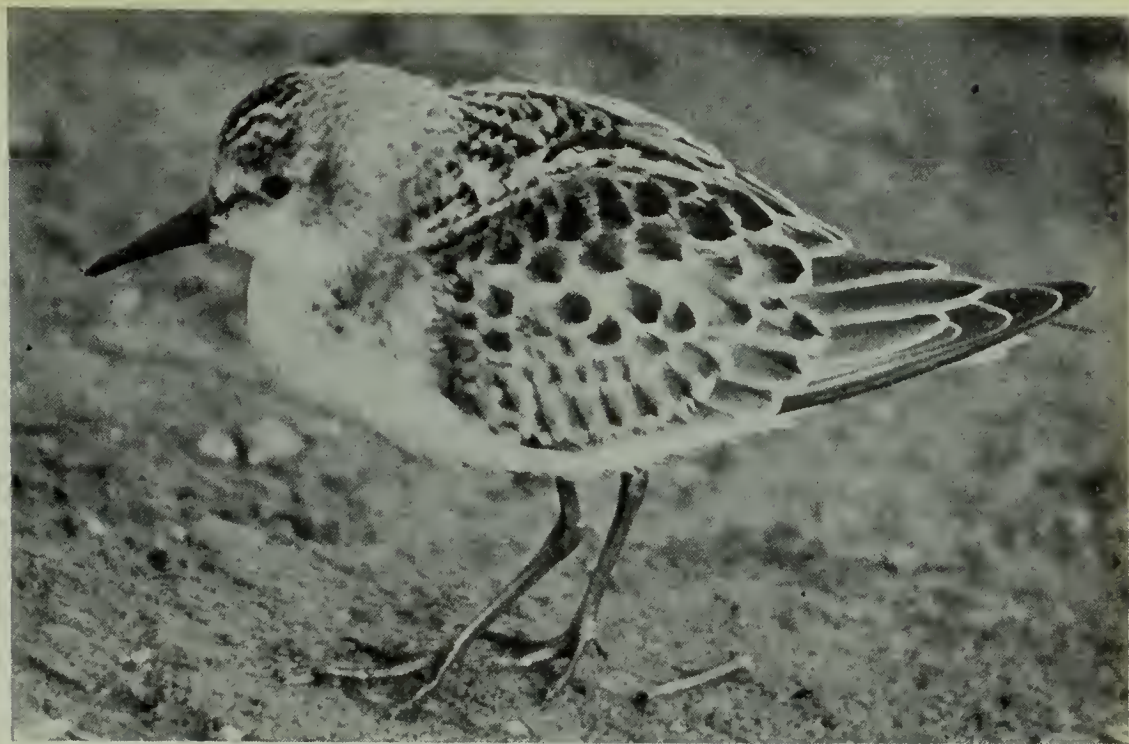


133. Juvenile Semipalmated Sandpiper *Calidris pusilla*, USA, October/November (Allan D. Cruickshank)

mated at this age (plates 132 & 133) has rather drab upperparts, with just a suggestion of warm buff or orange tones on the feather edgings; they lack both the invariably *prominent* white lines forming a V on the sides of the mantle, and the rich brown or rufous tones on the head, mantle and scapulars of most Little Stints of the

same age: these features are best assessed when viewed head-on or from behind. There is now generally little support for characters involving the head pattern, the white partial collar, or the presence of streaking at the breast-sides, all of which are clouded by individual variation of juvenile Little Stints.

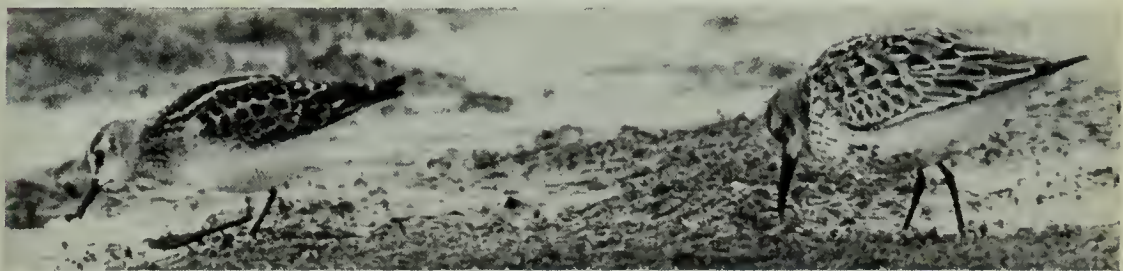
By far the most frequent pitfall in stint identification is the lack of general awareness of the appearance of Little Stints in other than the familiar juvenile plumage. In Britain, the overwhelming majority of autumn migrant Little Stints are juveniles (plates 134-136), and the occasional appearance among them of an adult in worn summer plumage, or individuals (probably first-years) which have moulted early into winter plumage—the latter can be encountered as early as late August—



134. Juvenile Little Stint *Calidris minuta*, Norfolk, August 1976 (R. J. Chandler)



135. Juvenile Little Stint *Calidris minuta*, Norfolk, September 1978 (J. D. Bakewell)



136. Juvenile Little Stint *Calidris minuta* and Dunlin *C. alpina*, Co. Cork, September 1975 (Richard T. Mills)

has caused many false alarms (plate 137). Worn summer adults have a generally drab appearance and lack a prominent V on the mantle, and individuals in winter plumage have strikingly white underparts and face,



137. First-winter or adult winter Little Stint *Calidris minuta*, South Africa, March 1974 (J. C. Sinclair)

and uniform brownish-grey mantle and coverts, with dark feather-centres which give a blotched appearance to the upperparts. When a rare stint is suspected, a firm assessment of its age should be a priority: this diagnosis will be easier for observers practised in ageing common waders. Close study of juvenile Little Stints, to assess the normal variation of the strength and extent of their rufous tones, is also recommended. The biometric and detailed plumage data in Prater *et al.* (1977) are useful, especially for trapped birds. It is clear, however, that the identification of a lone Semipalmated in Britain is not to be taken lightly: an acceptable diagnosis will rest on the clear observation of the majority, if not all, of the distinctions, by observers—preferably several—totally familiar with the voice and the different plumages of Little Stints.

Red-necked Stint

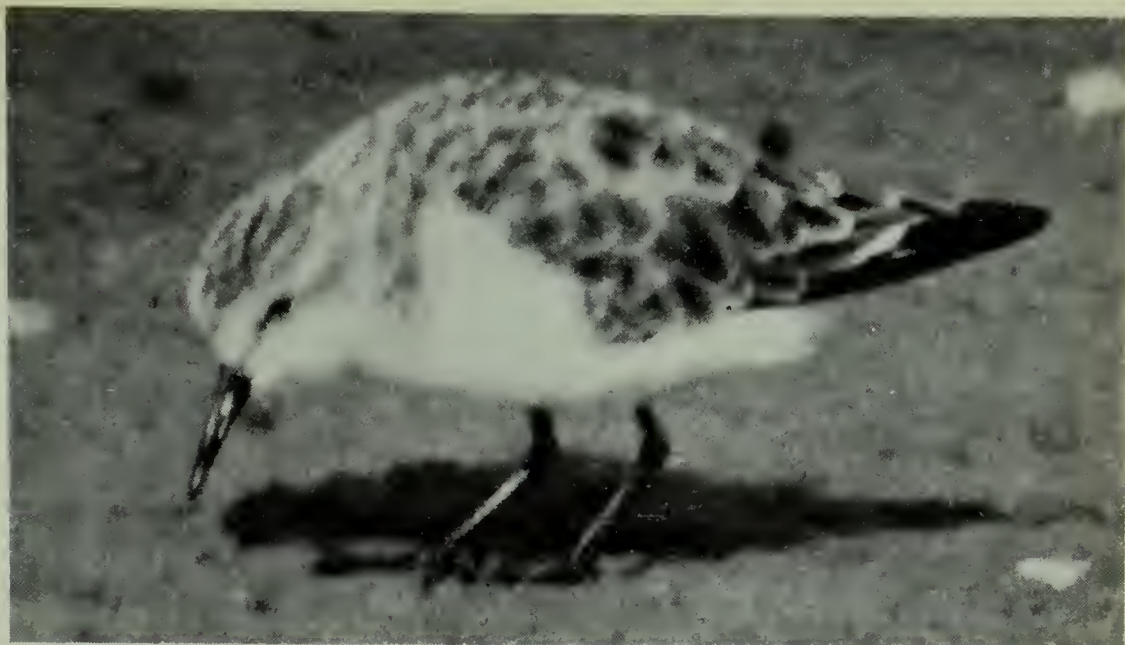
CLAIMED RECORDS

Between 1973 and 1975, the Committee received four claims of Red-necked Stint:

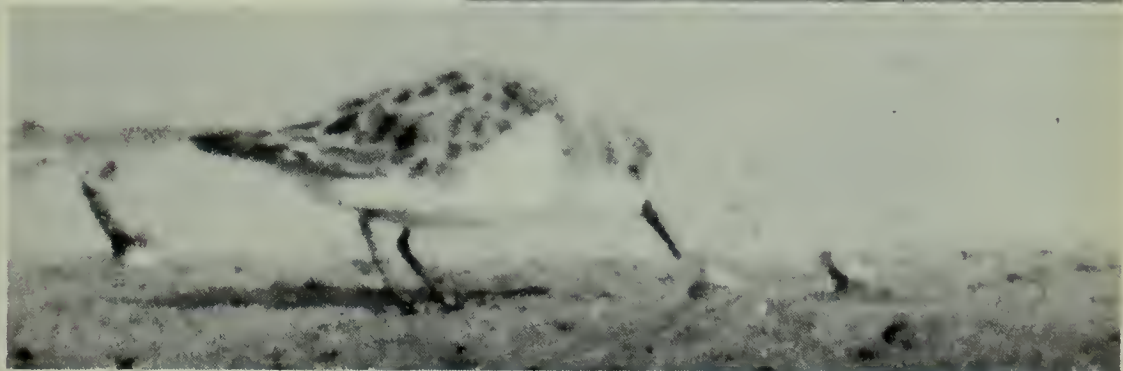
Suffolk 1973 Minsmere, 4th August to 26th October. This was an apparent adult in heavy moult, often among juvenile Little Stints. It was first identified as a Semipalmated Sandpiper, but doubts soon multiplied. When it was trapped and its feet were found to be unwebbed, opinions split between Red-necked and Little Stint. As noted in the Committee's file, the resultant controversy comes 'close to being the most complicated . . . of all time'. Opinions remain firm and hopelessly divergent. The balance within the Committee is that it was a first-summer or adult Little Stint assuming winter plumage. Plates 138-140 feature this bird.

Humberside 1973 Brough Haven, River Humber, 14th to 19th September. This bird was in quite fresh juvenile plumage and was in company with similarly aged Little Stints. It lacked any V on the back, recalled the 1965 Dungeness stint and closely resembled an undoubted Red-necked photographed in Australia in October. It was seen by one past and two present members of the Committee, none of whom is happy to write it off as an odd Little Stint; but other opinions on it are widely divided.

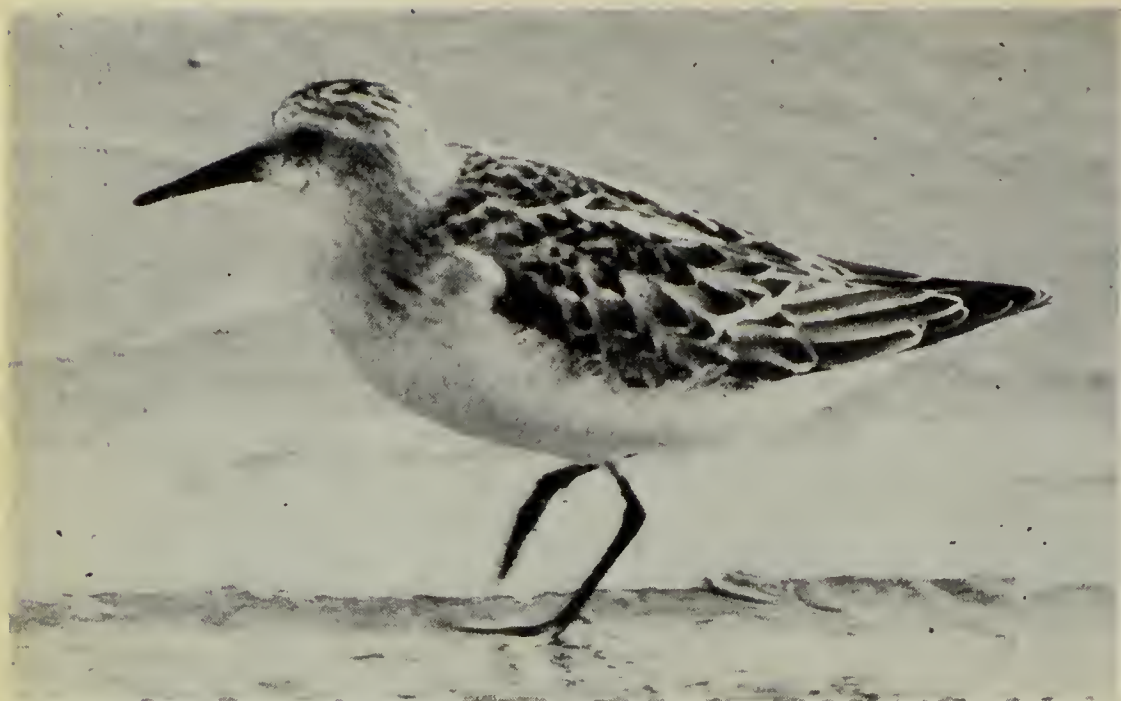
Lincolnshire 1974 Covenham Reservoir, 7th to 19th September. This was another unusual stint in rather dishevelled plumage, again unlike companion Little Stints in juvenile plumage. It was well photographed (plates 141-143), but again it has provoked a range of opinions within the Committee.



138-140. Stint *Calidris*, originally identified as Semipalmated Sandpiper *C. pusilla*, then as Red-necked *C. ruficollis* or Little Stint *C. minuta*, now considered to be first-summer or adult Little Stint moulting into winter plumage, Minsmere, Suffolk, September 1973 (*H. E. Axell*)



Durham 1975 Hurworth Burn Reservoir, 1st to 3rd September. This bird was in fresh juvenile plumage and was in company with similarly aged Little Stints. Noticeably paler than the three individuals noted above, it was first identified as a Semipalmated Sandpiper, but closer observation showed a clear lack of foot webs. The choice clearly lay, as with all these records, between Little and Red-necked Stints. One photograph of the latter species, taken in Japan in September (plate 145), was considered a close match by two observers, both past members of the Committee, but they and one current member could not agree on a certain identification. On circulation, the customary range of opinions was provoked.



141. Stint *Calidris*, perhaps Red-necked *C. ruficollis* but identity still uncertain, Lincolnshire, September 1974 (Keith Atkin)

DISCUSSION

Given the above situation, the Committee is unable to accept any of the claims of Red-necked Stint. Its members agree that this species may well be occurring in Britain, but they have found no secure criteria on which to base its differentiation from Little Stint. It is clear from an analysis of members' comments that there are several factors of confusion. First, there is the difficulty of visualising from photographs what juvenile and winter Red-necked Stints really look like. So far, only one member of the Committee and one other expert observer feel competent, on the basis of close-timed field study, to make comparisons between them and the



142 & 143. Stint *Calidris*, perhaps Red-necked *C. ruficollis* but identity still uncertain, with Little Stint *C. minuta* (above, left) and with Dunlin *C. alpina* (below, right), Lincolnshire, September 1974 (Keith Atkin)

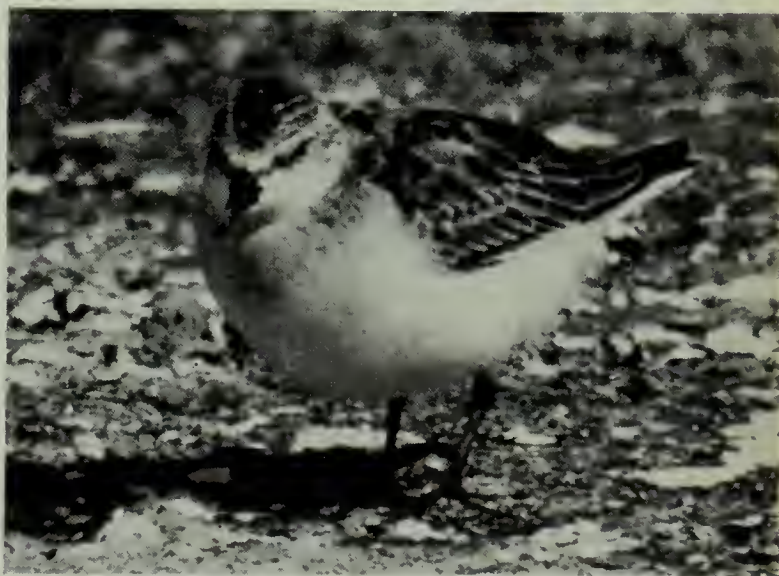




144. Juvenile Red-necked Stint *Calidris ruficollis*, Japan, September 1963 (S. Takano)



145. Juvenile Red-necked Stint *Calidris ruficollis*, Japan, September 1963 (S. Takano)



146. Red-necked Stint *Calidris ruficollis*, Australia, October 1973 (G. W. Johnstone)

other stints. No amount of peering at transparencies or photographs can fill this gap for others. Secondly, there is the danger of observers straining for differences and forgetting the quite wide morphological variation in the juvenile plumages of both Red-necked and Little Stints. Thirdly, there are arguments on the age of the birds concerned. At least two of the

four claimed Red-neckeds have provoked disagreement on this crucial aspect. The Committee feels that the fact that adult Little Stints in autumn and early winter look very different from their much commoner juvenile companions is not sufficiently appreciated: adults lack the classic V on the back of juveniles and can look strangely mottled above as their moult progresses. Furthermore, bleaching and wear breaks down their chestnut tones into those resembling other adult and immature stints. Finally, there is the well-known—but continuing—difficulty of assessing voice as heard by differing human ears.

If greater clarity can be obtained on the diagnostic characters of Red-necked, the Committee will reconsider all the above claims, but, for the moment, all is caution. Meanwhile, if a suspect Red-necked is trapped, the biometric and detailed plumage data in Prater *et al.* (1977) must be carefully read to ensure that every helpful character is recorded or checked.

The Committee appeals for further assistance in its research of stint identification, particularly with the haunting Red-necked, and will welcome photographs and comments relevant to the general problems or specific problem individuals.

Acknowledgements

I must note first the efforts of P. J. Grant and the other members of the Rarities Committee who have commented on the earlier drafts of this paper and are responsible for the revised judgments published within it. I also thank A. J. Prater and J. H. Marchant for suggestions on the form of the identification section and, more particularly, for providing would-be wader identifiers with their excellent guide (*Guide to the Identification and Ageing of Holarctic Waders*, 1977). Finally, I must praise the skill of the photographers, especially Dr Pamela Harrison whose pictures of the 1965 Dungeness and 1967 Sevenoaks birds provided an invaluable record and greatly aided the general research.

Summary

In May 1978, the Rarities Committee completed a 26-month review of the 12 published British records of Semipalmated Sandpiper *Calidris pusilla* and four claims of Red-necked Stint *C. ruficollis*. In the light of new criteria established since 1974 and the greater strictness necessary to ensure that atypical Little Stints *C. minuta* are not identified as their rarer cousins, the Committee has upheld only five records of Semipalmated Sandpiper and has not admitted, for the time being, any of the Red-necked Stints. The important field characters of Semipalmated are summarised. The reasons behind the changes in judgment and the general caution are discussed.

References

- PRATER, A. J., MARCHANT, J. H., & VUORINEN, J. 1977. *Guide to the Identification and Ageing of Holarctic Waders*. BTO Guide 17. Tring.
- WALLACE, D. I. M. 1974. Field identification of small species in the genus *Calidris*. *Brit. Birds* 67: 1-16.

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European news

This is the fifth summary in this regular six-monthly series. It is very pleasing to note the record total of 19 countries supplying records for this selection; we especially welcome contributions from the two new contributing areas: the Faeroe Islands and the Latvian SSR.

Records awaiting formal verification by national assessment committees are indicated by an asterisk (*).

Unless otherwise stated, records refer to single individuals

Red-throated Diver *Gavia stellata* FAEROE ISLANDS Total of about ten pairs breeding.

White-billed Diver *Gavia adamsii* NETHERLANDS Only 12 previous records, but at least five (at Goeree, Oostvoorne and IJmuiden) in January-February 1979*.

Great Crested Grebe *Podiceps cristatus* PORTUGAL Exceptionally common on the reservoirs in north in winter 1978/79.

Red-necked Grebe *Podiceps grisegena* BELGIUM First summering: one at Mol-Postel from 14th May to 15th June 1978. FRANCE First breeding since at least beginning of century: one pair reared one young southwest of Paris in spring 1978. (cf. increased summering in UK, *Brit. Birds* 71: 13.)

Slavonian Grebe *Podiceps auritus* DENMARK Largest-ever concentrations: at Bornholm, 23 in January 1979 and 70 in February 1979; sightings are normally of only single birds.

Black-necked Grebe *Podiceps nigricollis* SWITZERLAND First breeding record since 1971: three young being fed and carried by parents at altitude of 1,000 m on Lac de Joux on 5th August 1978.

Cory's Shearwater *Calonectris diomedea* NETHERLANDS Third record: Noordwijk on 1st October 1977.

Sooty Shearwater *Puffinus griseus* DENMARK Probably best-ever autumn in 1978 on north coast of Zealand and Jutland (e.g. 60 in two hours at Skagen). NETHERLANDS Unprecedented numbers, exceeding total of all previous occurrences: 1,200 in August-November 1978, including 270 on 11th September and 500 on 19th September.

Manx Shearwater *Puffinus puffinus* FAEROE ISLANDS Breeding numbers have declined.

Leach's Petrel *Oceanodroma leucorhoa* DENMARK Total of 160—either this species or

Storm Petrel *Hydrobates pelagicus*—at Blåvand, Westjütland, on one day in October 1978. NETHERLANDS Total of 150 in September-November 1978, including 45 on 17th September.

Gannet *Sula bassana* ITALY Rare until a few years ago, but now easy to see immatures and adults in Tyrrhenian Sea from end of November to early March.

Pygmy Cormorant *Phalacrocorax pygmeus* DENMARK First record: north Jütland in autumn 1977, apparently not an escape*, (cf. sixth Austrian record, in November 1977, *Brit. Birds* 71: 583).

Dalmatian Pelican *Pelecanus crispus* GERMAN FEDERAL REPUBLIC On the Elbe in Lüchow-Dannenberg, Lower Saxony, from 11th December 1976 to 6th March 1977 (may have escaped from captivity).

Bittern *Botaurus stellaris* ITALY Recently discovered breeding in southern Tuscany and Northern Apulia. SWITZERLAND Unusual number of reports in November-January 1978/79.

Night Heron *Nycticorax nycticorax* ITALY Po Valley colonies total 7,000-10,000 breeding pairs.

Squacco Heron *Ardeola ralloides* ITALY Total of 400-500 breeding pairs, all in Po Valley except for 10-15 near Manfredonia.

Little Egret *Egretta garzetta* ITALY Total of 3,500-4,000 breeding pairs, all in Po Valley except for 20-25 pairs near Castiglione della Pescaia and 40-50 pairs near Manfredonia.

Great White Egret *Egretta alba* ITALY Some regularly wintering in Venice Lagoon; two in National Reserve of Alviano Lake in Tiber Valley from October 1978 to February 1979. NETHERLANDS First breeding record: several individuals present in 1976, 1977 and 1978, and nest with four

young found in Flevoland in 1978*.

Grey Heron *Ardea cinerea* ITALY Total of 400-500 breeding pairs in Po Valley and four or five pairs at Castiglione della Pescaia.

Purple Heron *Ardea purpurea* ITALY Total of 1,500-2,000 breeding pairs in Po Valley, c. 15 pairs at Castiglione della Pescaia, 80-100 pairs in at least seven colonies in Sardinia and c. 50 pairs near Manfredonia.

Whooper Swan *Cygnus cygnus* GERMAN FEDERAL REPUBLIC Numerous reports from rivers (lakes frozen) in central and southern Lower Saxony, Westphalia and Rheinland, much farther south than usual, in winter 1978/79. LATVIAN SSR First breeding in 1973 and, at same place, in 1974. In 1977, two new breeding sites discovered and in 1978 a fourth: all on fish-ponds.

Bean Goose *Anser fabalis* BELGIUM Exceptional numbers (tens of thousands) in coastal areas of western Flanders in January 1979. DENMARK Largest-ever flock: 1,100 at Møn in early February 1979.

White-fronted Goose *Anser albifrons* BELGIUM Exceptional numbers (tens of thousands) in coastal areas of western Flanders in January 1979.

Lesser White-fronted Goose *Anser erythropus* BELGIUM Two near Damme, western Flanders, in January 1979.

Greylag Goose *Anser anser* FAEROE ISLANDS Breeding resumed: c. five pairs. SPAIN Highest number ever in Doñana National Park: 63,000 in December 1978.

Canada Goose *Branta canadensis* DENMARK Largest-ever flock: 900 at Møn in early February. GERMAN FEDERAL REPUBLIC In winter 1978/79, first significant invasion from Sweden into Lower Saxony, Westphalia and Rheinland: several hundred wintered.

Barnacle Goose *Branta leucopsis* POLAND Clear increase in frequency on passage, both inland and on coast.

Red-breasted Goose *Branta ruficollis* BELGIUM One near Damme, western Flanders, in January 1979.

Mandarin *Aix galericulata* ESTONIAN SSR First record: male at Kingissepa from 23rd to 29th August 1978.

Red-crested Pochard *Netta rufina* POLAND Several new breeding records in Poznań, Wrocław and Stupsk provinces (West

Poland) in 1970s (cf. expansion in Austria and Czechoslovakia, *Brit. Birds* 71: 583).

Ring-necked Duck *Aythya collaris* FRANCE First wintering: near Paris in winter 1977/78; another male near Sarthe for several days in winter 1978/79. GERMAN FEDERAL REPUBLIC Two adult males: near Bad Salzuflen, Northrhine Westphalia, on 13th March 1978 and at Bremen on 22nd April 1978. SPAIN Male at Gijón in January 1978.

Tufted Duck *Aythya fuligula* FAEROE ISLANDS Increased as migrant and in summer; perhaps a few pairs breeding.

Scaup *Aythya marila* FAEROE ISLANDS Increased as migrant; perhaps one pair breeding.

Steller's Eider *Polysticta stelleri* GERMAN FEDERAL REPUBLIC First on west coast of Schleswig-Holstein this century: adult male at Amrum from 10th to 15th July 1975 (cf. increases in Finland, Poland and Sweden, *Brit. Birds* 71: 255, 584).

Surf Scoter *Melanitta perspicillata* DENMARK Third or fourth record: male at Hvide Sande, west Jutland, in October 1978*.

Smew *Mergus albellus* BELGIUM Total of several tens of individuals on unfrozen waters, particularly the River Meuse, in January-February 1979.

Goosander *Mergus merganser* BELGIUM Several hundreds on unfrozen waters, particularly the River Meuse, in January-February 1979. DENMARK High concentration: 4,000 at Rørvig, north Zealand, in mid January 1979. SPAIN Notable influx in winter 1978/79, with maximum of 11 on Ebro Reservoir, Santander, on 19th January 1979.

White-headed Duck *Oxyura leucocephala* CZECHOSLOVAKIA Sixth record: 41, mostly males and juveniles, on Dřínov Lake, northern Bohemia, on 3rd November 1974; previous records all involved ones or twos.

Black Kite *Milvus migrans* BELGIUM First breeding in Flanders: Moerbeke in 1976; also attempt at Wachtebeke in 1977 and possibly successful attempt at Deinze in 1978.

Red Kite *Milvus milvus* BELGIUM First breeding in Flanders: Assenede in 1977 (cf. nesting in the Netherlands in 1977, *Brit. Birds* 71: 255).

Pallas's Fish Eagle *Haliaeetus leucoryphus* NETHERLANDS First and second records: adult near Barneveld on 12th October

1976, and immature in Flevoland in January 1979*, at same time as three White-tailed Eagles *H. albicilla*.

White-tailed Eagle *Haliaeetus albicilla* AUSTRIA More than usual wintering in 1978/79: up to five together on lower Danube and March rivers. FINLAND Many migrants in autumn 1978 at Åland Islands, where 15 wintered.

Griфон Vulture *Gyps fulvus* AUSTRIA Good numbers at feeding place established by WWF near Rauris, Salzburg; largest flock: 34 on 4th July 1978. NETHERLANDS Fifth record: Gaasterland on 5th March 1978 (probably an escape, as was Black Vulture *Aegypius monachus* near Groningen in March 1974).

Hen Harrier *Circus cyaneus* BELGIUM During 1978/79, more numerous than in previous winters, particularly in province of Brabant. SWITZERLAND In December 1978 to mid February 1979, over 60 reports, including 60 individuals in Broye plain around 20th January; influx started at Christmas and reached peak during 11th to 25th January, but only four remained by 5th to 9th February.

Pallid Harrier *Circus macrourus* NETHERLANDS First since 1966: immature north of The Hague in November-December 1978, the seventeenth record*.

Rough-legged Buzzard *Buteo lagopus* DENMARK In 1978/79, the many wintering individuals disappeared around the turn of the year, after the first winter storm. NETHERLANDS In comparison with previous years, high numbers wintering in 1978/79.

Golden Eagle *Aquila chrysaetos* PORTUGAL Number of breeding pairs decreasing.

Bonelli's Eagle *Hieraetus fasciatus* NETHERLANDS Third record: immature in Flevoland in November 1978*.

Capercaillie *Tetrao urogallus* SPAIN Now withdrawn from list of gamebirds and given full legal protection, since populations estimated to be down to 475 ♂♂ in the Cantabrian Mountains and 477 ♂♂ in the Pyrenees.

Crane *Grus grus* BELGIUM Passage heavier and later than usual in 1978, extending until 10th December. SWITZERLAND Two overwintered in Lake Zürich region.

Great Bustard *Otis tarda* BELGIUM First record since 1963: female ringed in German Democratic Republic reported from province of Hainaut at end of January 1979.

GERMAN FEDERAL REPUBLIC Invasion from east in winter 1978/79, the first since 1969/70; at least 120 in Lower Saxony and eastern Westphalia, and 60 in Rheinland; data being collated by Dr Dietrich Hummel (Trinchenberg 4, 3302 Cremlingen 1), who would welcome reports from other countries. NETHERLANDS Large influx with cold weather in January 1979: at least 40, but probably more; some still present in early March.

Oystercatcher *Haematopus ostralegus* BELGIUM Inland breeding increasing: e.g. at the Turnhoutse Kempen, 15 pairs in 1973, 36 pairs in 1978.

Avocet *Recurvirostra avosetta* PORTUGAL More than usual wintering in 1978/79.

Killdeer *Charadrius vociferus* SWITZERLAND December 1977.

Greater Sand Plover *Charadrius leschenaultii* MALTA Fourth record: July 1978. POLAND Second record: near Gdańsk on 4th and 12th September 1978.

Spur-winged Plover *Hoplopterus spinosus* GERMAN FEDERAL REPUBLIC Second record: Jadebusen, Lower Saxony, on 3rd September 1978.

Sociable Plover *Chettusia gregaria* NETHERLANDS Only three up to 1974, but six since, including two in 1978: Veldhoven in May and Callantsoog in July.

Lapwing *Vanellus vanellus* FAEROE ISLANDS Breeding numbers increased.

Little Stint *Calidris minuta* NORWAY Exceptional numbers in autumn 1978, including about 1,000 ringed at one locality in county Möre og Romsdal.

Least Sandpiper *Calidris minutilla* GERMAN FEDERAL REPUBLIC First record: Clauen, near Hildesheim, Lower Saxony, autumn 1978*.

White-rumped Sandpiper *Calidris fusca* DENMARK First and second records: adult at Ulfshale, Møn, on 17th July 1978 and juvenile there on 26th October 1978.

Baird's Sandpiper *Calidris bairdii* NETHERLANDS Second record: Oostvoorne on 22nd January 1977.

Purple Sandpiper *Calidris maritima* FAEROE ISLANDS Breeding numbers greatly declined.

Dunlin *Calidris alpina* POLAND Breeding proved far inland: downy young found in Biebrza Marshes, where nesting suspected in 1960s.

Buff-breasted Sandpiper *Tryngites sub-ruficollis* AUSTRIA Third record: Rheindelta from 4th to 13th October 1978. GERMAN FEDERAL REPUBLIC Fourth record: two at Westerheversand, Schleswig-Holstein, on 3rd August 1978. MALTA Second record: October 1978. POLAND First and second records: Nysa on 22nd September 1978, and Otmuchów on 17th October 1978, both localities in Opole province, Silesia.

Ruff *Philomachus pugnax* DENMARK Highest-ever number: 3,570 at Vidåen, south Jutland, in mid May 1978.

Jack Snipe *Lymnocyptes minimus* POLAND Several displaying in April and then nests found on 16th and 21st May 1977 in Biebrza Marshes.

Lesser Yellowlegs *Tringa flavipes* GERMAN FEDERAL REPUBLIC Meldorf, Schleswig-Holstein, on 19th August 1978.

Terek Sandpiper *Xenus cinereus* ROMANIA First record: western Sahalinul Mare region, Danube Delta, on 15th July 1972.

Red-necked Phalarope *Phalaropus lobatus* FAEROE ISLANDS Breeding numbers declined.

Pomarine Skua *Stercorarius pomarinus* CZECHOSLOVAKIA Unusual number of skuas in 1976, mostly in September-October, one in July. Six Pomarines and also two Arctic Skuas *S. parasiticus*, all juveniles.

Arctic Skua *Stercorarius parasiticus* FAEROE ISLANDS Breeding numbers declined.

Long-tailed Skua *Stercorarius longicaudus* LATVIAN SSR Total of 30 exhausted immatures counted on southwest coast in September-October 1978.

Great Skua *Stercorarius skua* FAEROE ISLANDS Most breeding colonies have declined.

Great Black-headed Gull *Larus ichthyæetus* POLAND First record: immature near Nysa, Silesia, on 18th September 1978.

Mediterranean Gull *Larus melanocephalus* ITALY First evidence of breeding: c. 25 breeding pairs at Comacchio Lagoon, Ravenna, in summer 1978. POLAND More frequent occurrence: only eight records before 1970, but at least 12 since, some of adults in breeding season. (cf. nesting in Austria, *Brit. Birds* 71: 584.)

Little Gull *Larus minutus* POLAND Only sporadic breeding in recent years at the regular site at Lake Drużno, but colony of over 50 nests found in Biebrza Marshes in 1978.

Slender-billed Gull *Larus genei* ITALY First evidence of breeding outside Sardinia: two pairs on same island as Mediterranean Gulls in summer 1978.

Common Gull *Larus canus* AUSTRIA Exceptionally abundant, with largest concentration ever in winter 1978/79: several thousands (2,000, mainly adults, at one site) feeding on dead fish at frozen lakes in Seewinkel, northeast Burgenland, in late February.

Lesser Black-backed Gull *Larus fuscus* FAEROE ISLANDS Breeding numbers greatly increased.

Glaucous Gull *Larus hyperboreus* SWITZERLAND Second record: first-winter at Horn and Reichenau Island from 23rd December 1978 to 12th February 1979; mainly in German territory, but also flew to Swiss shore of lake*.

Great Black-backed Gull *Larus marinus* FAEROE ISLANDS Breeding numbers greatly increased.

Caspian Tern *Sterna caspia* ITALY First evidence of breeding: one or two breeding pairs on same island as Mediterranean Gulls in summer 1978 (see above).

Roseate Tern *Sterna dougallii* BELGIUM First records, hybridising with Common Tern *S. hirundo*: at Zwin reserve, one from 9th May to 9th August 1976, reared one chick (presumably paired with Common Tern); one, again at Zwin, 11th June and 23rd June to 26th July, hybridised with Common Tern.

Arctic Tern *Sterna paradisaea* BELGIUM First breeding record: Zwin reserve in 1976. SWITZERLAND Second record: Geneva on 13th and 14th May 1978.

Sooty Tern *Sterna fuscata* NORWAY First record: two in county Vestfold on 15th May 1976.

Little Tern *Sterna albifrons* BELGIUM Practically vanished as breeding bird in last ten years.

Whiskered Tern *Chlidonias hybridus* ITALY About 60 pairs breed regularly in Valle Santa and Valle Campotto Natural Reserve, Ferrara.

White-winged Black Tern *Chlidonias leucopterus* POLAND Marked increase and westerly range expansion: breeding pairs in Biebrza Marshes in northeast Poland have risen from 20-25 in 1966-68 and c. 90 in 1971 to 200-250 pairs in 1978; during

1976-78, also found breeding near Konin in central Poland.

Brünnich's Guillemot *Uria lomvia* DENMARK First record since 1925: one dead (oiled) at Skagen, north Jutland. NETHERLANDS Eighth record (and first one seen alive): Brouwersdam, Zeeland, from 4th to 10th February 1979, when found dead (oiled)*.

Puffin *Fratercula arctica* FAEROE ISLANDS Breeding numbers greatly increased (Black Guillemot *Cepphus grylle* has also increased, but Guillemot *Uria aalge* and Razorbill *Alca torda* have both declined).

Rock Dove *Columba livia* FAEROE ISLANDS Breeding numbers increased.

Great Spotted Cuckoo *Clamator glandarius* NORWAY Second record: ringed in county Møre og Romsdal in August 1978. SWITZERLAND Sixth record: immature at La Connex, Geneva, from 2nd to 4th July 1978.

Eagle Owl *Bubo bubo* FINLAND The very cold winter of 1978/79 created problems: young rescued from freezing after they had attempted but failed to catch Mallards *Anas platyrhynchos*, Black Guillemots *Cepphus grylle* and other waterbirds on Åland Islands.

Bee-eater *Merops apiaster* FRANCE Three colonies in south of Parisian region (Fontainebleau) totalled 26 pairs in 1978 compared with four pairs in 1977 (cf. nesting in Sweden, *Brit. Birds* 71: 585).

Short-toed Lark *Calandrella brachydactyla* NETHERLANDS Second and third records: Wassenaar on 3rd October 1978, and Castricum on 24th October 1978.

Shore Lark *Eremophila alpestris* GERMAN FEDERAL REPUBLIC Unprecedented numbers in winter 1978/79 in northern and central Germany. SWITZERLAND Fanel on 24th December 1978, Tägerwilten from 15th to 17th January 1979 and Rhine Delta on 17th and 18th January 1979*.

Richard's Pipit *Anthus novaeseelandiae* NETHERLANDS FCW in 1978 compared with 1977.

Tawny Pipit *Anthus campestris* SWITZERLAND Analysis of 1,736 records of migrants during 1957-78 shows that spring peak occurs during 20th-30th April and autumn peak during the last few days of August and the first three weeks of September: migrating pipits were usually singletons, but resting flocks were often of four to 18 birds and exceptionally up to 35.

Olive-backed Pipit *Anthus hodgsoni* MALTA First record: trapped at Ghadira on 30th October 1977 (*Il-Merrill* 19: 11). POLAND First record: Nysa, Silesia, on 6th September 1978.

Yellow Wagtail *Motacilla flava* ROMANIA The black-headed race *feldegg*, recorded in 1960 in south of Oltenia near Danube, seen carrying food to young in July 1972 north of Craiova in Isalnita and north of Dragasani in Olt Valley.

Citrine Wagtail *Motacilla citreola* SWEDEN The record of breeding already noted (*Brit. Birds* 70: 496) concerned a male feeding three fully fledged young on 14th and 17th July 1977; as in the case of the English breeding record (*Brit. Birds* 71: 209-213), the fledglings could not be specifically identified with certainty (*Vår Fågelvärld* 38: 47).

Grey Wagtail *Motacilla cinerea* DENMARK Expanding as breeding species: now on many streams in western Jutland (cf. first breeding in Estonian SSR and increase in southern Sweden, *Brit. Birds* 71: 256, 585).

Waxwing *Bombycilla garrulus* AUSTRIA Small influx in east from mid January 1979; parties of up to 80 in mid February. DENMARK Very few in autumn 1978. FAEROE ISLANDS Invasions in October 1974 and autumn 1977. NORWAY Even fewer in autumn 1978 than in 1977, only two or three flocks of about 30, and a few small parties, around Oslo in October-November (usually common in flocks of 50 or more); practically none after December.

Rufous Bush Robin *Cercotrichas galactotes* ROMANIA First record: Calimancsti, on islet in River Olt, on 21st August 1974.

Thrush Nightingale *Luscinia luscinia* NETHERLANDS Singing at Texel and Vlieland in May 1978 (only four previous records, the first in 1968).

Black Redstart *Phoenicurus ochruros* DENMARK Expanded as breeding species: now common even in small towns; at least 150 breeding pairs in southern Jutland.

Stonechat *Saxicola torquata* NETHERLANDS Two of one of the eastern races, *maura* or *stejnegeri*, near Katwijk in October 1978*.

Blackbird *Turdus merula* FAEROE ISLANDS Breeding numbers greatly increased.

Eye-browed Thrush *Turdus obscurus* NETHERLANDS Second record: adult male and female or immature at Amsterdamse Bos, Amstelveen, from 24th to 26th April

1977 (previous record was on 27th October 1843) (*Limosa* 51: 170-172). (cf. reports in Finland in spring 1978, *Brit. Birds* 71: 585.)

Black-throated Thrush *Turdus ruficollis* NETHERLANDS Second record: *atroregularis* at Katwijk on 8th October 1978* (first was nominate race in 1966).

Fieldfare *Turdus pilaris* AUSTRIA Unusually large flocks (6,000-7,000 on one occasion) in Seewinkel, northeast Burgenland, in second half of December 1978. FRANCE Westward expansion continues: nested in department of Aube (cf. *Brit. Birds* 71: 585).

Fan-tailed Warbler *Cisticola juncidis* BELGIUM After spectacular year of 1975, records decreased, and none in 1978. SWITZERLAND In 1978, first observation on 20th August: singing male at Chavornay.

Reed Warbler *Acrocephalus scirpaceus* NORWAY Established as breeding species in county Rogaland since 1976; present at several localities there in summer 1978.

Greenish Warbler *Phylloscopus trochiloides* NORWAY First record of singing male: in forest north of Oslo in June-July 1978.

Pallas's Warbler *Phylloscopus proregulus* GERMAN FEDERAL REPUBLIC Neuwerk, Elbe Estuary, on 19th October 1978*. LATVIAN SSR Five records: first in 1967, two in 1976 and two in 1978: all in Pape.

Yellow-browed Warbler *Phylloscopus inornatus* GERMAN FEDERAL REPUBLIC Neuwerk, Elbe Estuary, on 16th October 1978*. LATVIAN SSR First recorded in 1967 (six); subsequently, one in 1968, four in 1969, one in 1971, four in 1974, three in 1975 and two in 1978: all in Pape.

Dusky Warbler *Phylloscopus fuscatus* GERMAN FEDERAL REPUBLIC First record: Oststeinbeck, Schleswig-Holstein on 21st November 1977. NETHERLANDS First record: Terschelling from 19th to 22nd October 1978*.

Bearded Tit *Panurus biarmicus* DENMARK Heavy decrease in cold period of February-March 1978; feared that species will be extinct in Denmark after 1978/79 winter. ESTONIAN SSR First record: two males in southwest, at Ikla and Kabli in Pärnu district, near border with Latvian SSR, on 15th April 1978.

Siberian Tit *Parus cinctus* ESTONIAN SSR First record: caught and released at Kabli, Pärnu district, on 11th October 1977.

Nuthatch *Sitta europaea* SWITZERLAND Invasion: visible movements from early September 1978; at Col de Bretolet, where not caught annually, 29 ringed between 11th and 27th September, a record number.

Rook *Corvus frugilegus* FINLAND Large numbers (hundreds in many places) in south during 7th-10th March.

Redpoll *Carduelis flammea* DENMARK Still expanding as breeding species: now common in many inland localities.

Crossbill *Loxia curvirostra* FINLAND Very common, especially in interior, during winter 1978/79; breeding.

Parrot Crossbill *Loxia pytyopsittacus* FINLAND In early 1979, commonly breeding in many places, especially on coast.

Scarlet Rosefinch *Carpodacus erythrinus* FRANCE Singing male in forest of Tronçais (Allier) from end of May to 8th July 1977.

Pine Grosbeak *Pinicola enucleator* LATVIAN SSR Heavy invasion in 1976; smaller one in 1978.

Fox Sparrow *Zonotrichia iliaca* GERMAN FEDERAL REPUBLIC Second record: Scharhorn on 24th April 1977.

Snow Bunting *Plectrophenax nivalis* FAEROE ISLANDS Breeding numbers now increased to about five pairs.

Cirl Bunting *Emberiza cirlus* ROMANIA Expansion of breeding range: recorded in southwest in 1913, extended to northwest of Oltenia by 1968; in 1972, singles at Arges Dam and Oltet Gorges.

Ortolan Bunting *Emberiza hortulana* NORWAY Enormous decrease in about 1960: formerly common in southeast, but now confined mainly to Gudbrandsdalen in county Oppland and a few other localities in Oppland, Hedmark and Buskcrud; no recent breeding records in counties Akerhus and Vestfold, where once almost as common as Yellowhammer *E. citrinella*.

Rustic Bunting *Emberiza rustica* ESTONIAN SSR First record: singing male at Aravete, Paidc district, on 12th May 1978 (cf. expansion in Sweden, *Brit. Birds* 71: 587). MALTA Eighth and ninth records: October and November 1978.

Yellow-breasted Bunting *Emberiza aureola* ESTONIAN SSR First record: singing male in arca of upper reaches of Ahja River, Polva district, on 15th May 1977. MALTA Fourth record: September 1978. NETHERLANDS Third record: Rottumerplaat on 15th July 1978.

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Viewpoint

9 W. R. P. Bourne

Dr Bill Bourne's name is most closely linked with seabirds and seabird research, but his interests and influence are wide. He was profiled recently ('Brit. Birds' 71: 123-125), being described as: 'a classic stormy petrel, but an original and commanding character in an era when it is fashionable to conform.'

Ornithological organisation

Few parts of the world contain so many birdwatchers as Britain, or such an elaborate ornithological organisation with such vast resources, if only they were properly used. In most fields, we have always been the pioneers, both at home and abroad. Initially indefatigable explorers and ruthless collectors, more recently we have been constrained to sit at home and think and conserve. Here, our early birdmen were very broad-minded indeed: poets and scholars who contemplated the whole of nature at the risk of being considered intellectually unsound and burnt for heresy or witchcraft. Nowadays, the authorities are more subtle and try to get people to set themselves on fire instead (which I suspect is why I was asked to write this article). More recently, we have many achieve-

ments to our credit. Complacency, however, keeps on breaking in, and we seem to have a nasty attack of it at the moment. It may be useful to survey the situation and consider whether anything needs to be done.

British ornithology has grown by a process of fragmentation. Originally, it was part of one central body of science, served by what became the Royal Society. Later, there were the Linnean Society and the Zoological Society of London, and, eventually, our own 'learned' society, the British Ornithologists' Union. This had to be supplemented by a British Ornithologists' (dining) Club and a Society for the Protection of Birds, formed by lovely ladies—excluded from the other bodies—who were concerned about the plume trade. Then, people who felt they needed more fresh air started the British Trust for Ornithology, and now every county and branch of the subject has its own organisation competing for your subscriptions. The growth of popular ornithology has also provided an opening for academics and officials in museums and universities and government departments to tell us all what to think and do. Is it what we intended?

To start off with, let us consider how this ramshackle apparatus is controlled. The aspiring amateur administrator hangs about making himself useful until he is invited to sit on committees, when, if he plays his cards properly, he is assured of a place for life, since, while the membership is rotated, nobody new is invited while there is an old friend in good standing around. In case there should be any doubt, the selection is guided by the members of the permanent staff that the committee is supposed to be overseeing, because they are so much more experienced. They take care to suggest a wide political and geographical spectrum of reliable old friends to provide a 'balanced representation' and to 'maintain continuity', to prevent the emergence of tiresome new pressure-groups which might want changes involving more work. Those who survive long enough eventually get invited to serve on government committees as well, and are eventually rewarded with an obsolete decoration. At one time, I served on 23 committees before I became rude and was allowed to get off the merry-go-round.

People who seriously wish to watch birds will not have time for this, so they have to find other means of self-expression, such as publishing papers. This is also a specialised proceeding. The best ideas are found in ancient authors such as Aristotle, who already knew everything, so read him until you come to a subject which has not been mentioned recently, such as bird migration (dealt with most efficiently), and then copy him out with statistical tests and references, and send the result to a journal. Do not try the editors of a bird one at first, since they will turn you down because they have never heard of either you or the subject before, and you are not a member of staff (*Bird Study*), do not mention rare birds (*British Birds*), say something sensible (*Birds*) or are easy to understand (*The Ibis*), but try some general journal, such as *Science* or *Nature*, which has not published a bird article in living memory. It will probably have a referee who actually knew Aristotle and is so pleased to hear about migration again that he advises accelerated publication. People will be so astonished that they will

give you a grant for nine whole days until the next wonder comes along, and publish any other nonsense you care to write because they now know it is 'original'. If you get away with this three times, you may even be offered a permanent post and never have to work again, except of course for teaching students or running a department.

It is hardly surprising that the rest of the world has difficulty in taking birdwatchers seriously. They are generally regarded as dotty, dilettante escapists, preoccupied with rarities with daft names of no practical importance (for this I blame *British Birds*), prone to hysterical outbursts about conservation on the strength of which they feel entitled to get all their facts wrong, and generally determined to prevent other people enjoying legitimate field sports, developing real estate, and improving technology. Their credibility is further undermined when they are found to be divided into many factions prone to public fratricidal warfare in which the truth seldom seems to be on the side of the big battalions. Frankly, these tendencies seem to have been increasing recently, at a time of growing threats to our liberties, and, if birdwatchers wish to retain public respect and their freedom of action, it seems time to do something about it.

For example, in the first place, is it really desirable that such a large part of the resources subscribed by the British public for conservation should be appropriated by birdwatchers, instead of being distributed between all naturalists, as they are in America? Since so much of the national conservation kitty has been collared by bird-men, is it really desirable that such a high proportion of it should be appropriated by the glorified Christmas-card salesmen and emasculated gamekeepers of the RSPB, while the serious research organisation, the BTO, is so starved of funds that it has to fall back on government grants festooned with political strings? If we agree that the government should indeed subsidise amateur research, is it then healthy that so much of the patronage should be dispensed through one channel, big brother the Nature Conservancy Council? In consequence, the scientific staff of our voluntary bodies, likely now to be paid at government rates even when it is at our expense, seem liable to become more dependent on the capricious goodwill of officials of the civil service than the needs of the membership. Alternatively, would we prefer to see government departments spend the money in mysterious ways under cover of the Official Secrets Act, while the voluntary effort collapses for lack of support?

It seems time our serious ornithologists gave more consideration to such matters, while they still retain some grasp of the situation. It seems time that the conservation lobby, who say some very silly things (for example, about North Sea gas flares), looked beyond the cruder public relations, membership-recruiting and fund-raising aspects of their activities to the wider implications. It also seems time that some of our academics teaching the young developed more sense of social responsibility. It seems time for the balance of power, resources and responsibilities between many of our official and voluntary institutions to be readjusted, and for more steps to be taken to restore the effectiveness of democratic control over some of the larger ones. It is not impossible for independent candidates to secure elec-

tion to various councils (I have done it twice), or to establish new bodies to serve special ends when old ones fail us (the Seabird Group), though in time it proves very tiring. Moreover, when we lose patience with established institutions and their resources prove insufficient, there are often alternatives available, such as the more enlightened parts of industry, which sometimes include familiar colleagues in their working clothes. It seems time for a serious consideration of new alignments to carry democratic British ornithology safely into the 21st century. It is at risk.

W. R. P. BOURNE

Mystery photographs

30 Three species of snipe occur in Europe and so striking are their common characters—long bill, striped head, dark intricately striped and chequered upperparts, well marked flanks and feeding behaviour—that surely everyone will have recognised the bird in plate 110 as one of them. It takes, however, rather more effort and knowledge to make a specific identification, particularly since, in the field, one will rarely show itself as well to a roving observer as to a hidden photographer. Even if it does, certain crucial marks may not be exhibited; worse still, an overclose approach may lose the bird for ever. So, successful distinction between the three species depends largely on seeing the tell-tale characters quickly (and then making sure that you really did!).



Relating its size to the foreground vegetation, the mystery bird is clearly not small and this immediately begins to rule out a Jack Snipe *Lymnocyptes minimus*, the tiniest of the three possible species. Its exclusion is completed by noting the flank marks, profuse chevrons and not lateral streaks; the head and upperpart pattern is also wrong. Clearly, the bird is either a Snipe *Gallinago gallinago* or a Great Snipe *G. media*, but the outer tail feathers or full wing pattern are not apparent. So, it is the underparts which demand attention. Is there a prominent white belly between the barred flanks? There is not; small chevrons show even on the feathers cloaking the tibia. Such profuse general barring (and the rather dark chest) start the bell ringing for Great. On the other hand, the head stripes and back stripes are distinct enough for Snipe and the pale tips to the lesser wing-coverts are not particularly obvious. Do you feel tempted to flush it? Do not; look instead at the bill and legs. Although the tip of the bill is hidden, that part is both stout and rather short, which description also applies to the legs. Such bare-part structure is typical of Great (compare the really long bill of Snipe in the accompanying plate 147, which also shows the white belly of that species to advantage). So the

147. Snipe *Gallinago gallinago*, Gwynedd, August 1976 (R. J. Chandler)



mystery bird is a Great Snipe in first-autumn plumage; it was photographed by G. K. Brown in Saudi Arabia in September 1977. Close comparison of the two photographs reveals differences in individual feather marks (which will, however, be difficult to see in the field) and the rather larger head of Great. Finally, if the bird had flown, you should have concentrated on the wing pattern and escape behaviour. Both species show a pale trailing edge to the wing, but only Great shows an intensely dark, white-bordered central panel. Finally, it is Snipe that flies off in a desperate zigzag, calling 'scaap', to land far off. Great (like Jack) usually goes off on a direct line, recalling Woodcock *Scolopax rusticola* or Ruff *Philomachus pugnax*, and not calling (or just croaking once), to land quite close.

Two other Palearctic species need to be considered, however, when faced with an unusual snipe: Pintail Snipe *G. stenura* and the very similar Swinhoe's Snipe *G. megala*, neither of which has yet been recorded in

148. Mystery photograph 31. Identify the species. Answer next month



western Europe. These two species lack the barred belly of the bird in the photograph and both have rather unmarked upperwing patterns, relieved only by paler median coverts; both also lack the prominent white trailing edge of Snipe and the marked central panel of Great Snipe (see also *Brit. Birds* 70: 146-152).

Confusion over Snipe and Great Snipe identification lasted a long time, but I hope that most of it cleared away following the publication of my recent papers (*Brit. Birds* 69: 377-383, with mistake; and 70: 283-289, without).

D. I. M. WALLACE

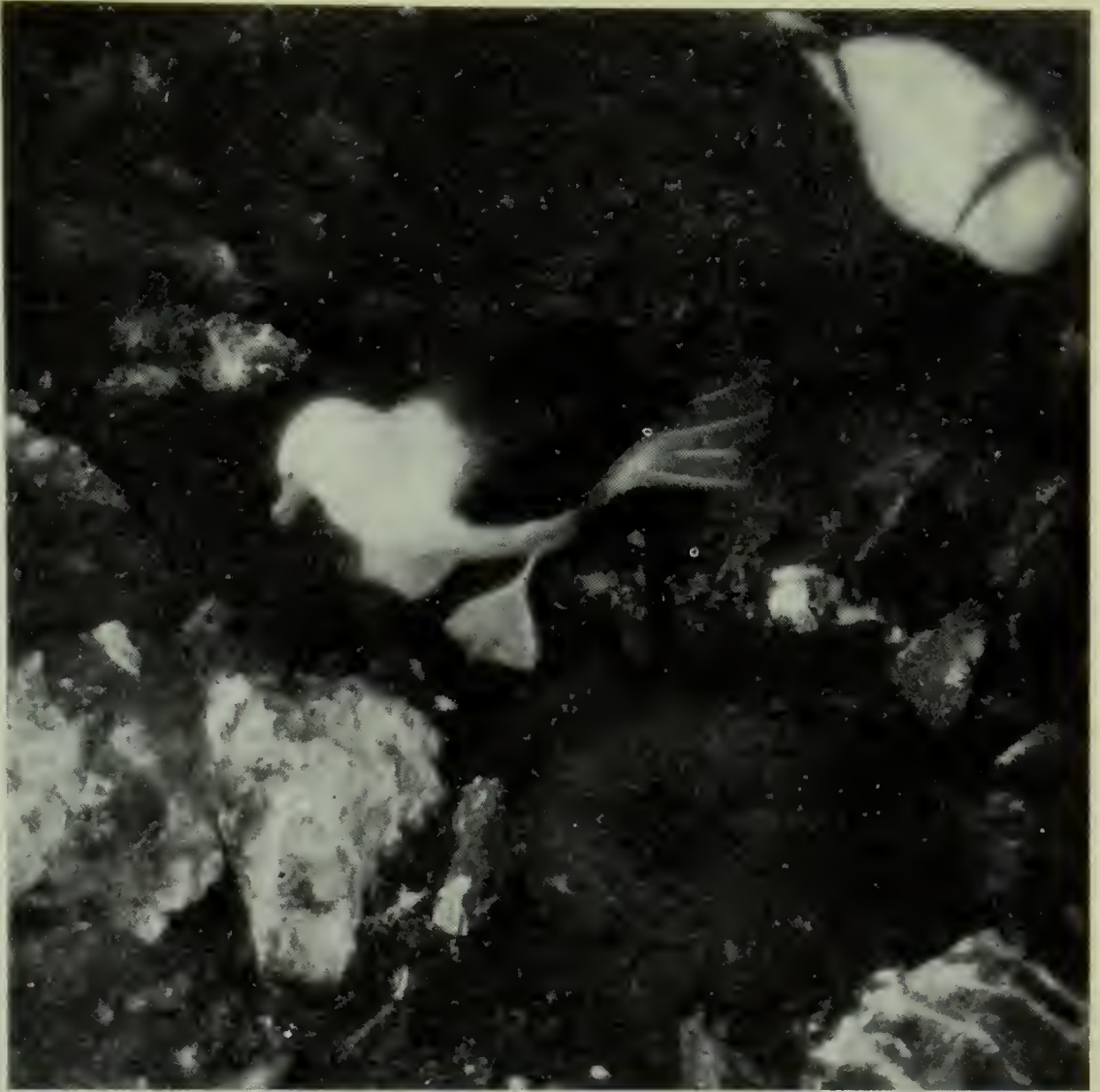
Notes

Nest of Black-browed Albatross in Shetland Bourne (1977) noted the apparent incubating behaviour of the Black-browed Albatross *Diomedea melanophris* at Hermaness, Shetland, during June 1976, and O'Sullivan *et al.* (1977) recorded the building of a nest during the same year. Apparent nest-scraping had, however, been observed even during 1974, the first summer from which the bird's presence was noted annually at Hermaness (Albon *et al.* 1977). On 15th June 1975 (at the same site), we watched it rise from a sitting position and reveal a ring of what appeared to be compacted earth about 50 cm in diameter (estimated by comparing with the length of the middle toe, see Cramp &



149. Black-browed Albatross *Diomedea melanophris* on nest, with Gannet *Sula bassana* nearby, Shetland, July 1978 (Donald A. Smith)





150. Black-browed Albatross *Diomedea melanophrys* beside nest, with Gannet *Sula bassana* nearby, Shetland, June 1975 (William J. Sutherland)

Simmons 1977). The total height of the structure (plates 149 & 150) appeared to be about 15 cm, with a central depression (seeming to contain a little debris) of about 5 cm, but our viewpoint (almost directly above) made estimation difficult. On one occasion, we observed the bird scraping earth towards the structure, which was about 2 m from the nest of the nearest Gannet *Sula bassana*. In the absence of positive information from 1974, this would seem to be the first recorded nest of an albatross (Diomedeidae) in the North Atlantic. This bird has occupied the same site every summer from 1974 to 1978 (A. Martin *in litt.*); on Bird Island, South Georgia, it is usual for individual Black-browed Albatrosses to return to the same nest in successive years (Tickell & Pinder 1975).

In about 20 hours' observations during 15th-21st June 1975, the albatross was twice seen displaying in a manner similar to that described by Waterston (1968) for the Black-browed Albatross on the Bass Rock, Lothian, in 1967. On both occasions it was about 2 m from its nest and the displays were directed towards adult Gannets. W. L. N. Tickell detected no differences in fixed action patterns between male and female of this

species and that both members of the pair engage in nest building (*contra* Matthews 1929); hence, it is unfortunately, as yet, impossible to sex this bird.

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Hen Harriers hunting over the sea The notes by Paul A. Doherty (*Brit. Birds* 71: 307) and Frank King (71: 589-590) on the subject of Marsh Harriers *Circus aeruginosus* hunting over water reminded me of a curious event I witnessed in 1975 on the island of Copinsay, off the eastern end of the mainland of Orkney. While counting gulls from the southern tip of the island on the afternoon of 28th October, I noticed two female or immature Hen Harriers *C. cyaneus* circling over the sea some hundreds of metres to the southeast of the island. Numbers of Fieldfares *Turdus pilaris* and Redwings *T. iliacus* were flying low over the sea towards Copinsay and the adjacent part of Mainland and the harriers made repeated dives and low-level chases in pursuit of those which came close. After about 20 minutes, one of the harriers seemed to strike a thrush with either its wings or its talons; the victim dropped into the sea, only to rise again before the harrier was able to pick it up. The two harriers continued to chase thrushes repeatedly—but unsuccessfully—for a further 35 minutes and then flew back to Copinsay, where they spent the remainder of the day hunting in the conventional manner. Hunting over the sea by Hen Harriers seems likely to be even rarer than hunting over open water by Marsh Harriers.

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Hen Harrier repeatedly stooping at small bird On 11th February 1978, by the River Stour at Sandwich Bay, Kent, a female or immature Hen Harrier *Circus cyaneus* flushed a small bird from waste ground and pursued it closely for about 30 m at a height of about 1 m. The small bird flew over the river and away across a field at a height of about 40 m. The harrier followed. About 800 m from where it had been flushed, the small bird lost altitude and the harrier rapidly overhauled it, at the same time gaining height and increasing its speed considerably. The raptor then stooped at the bird, like a clumsy Peregrine *Falco peregrinus*, folding its wings towards its body and dropping steeply for about 5 m, but missed its

quarry. It repeated the stoop three times, but still failed to make contact, although it forced its intended prey further towards the ground. Both birds were then lost to sight.

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Donald Watson, author of the recent monograph on the species (1977, *The Hen Harrier*), has commented that, although similar to the stooping behaviour of an aggressive Hen Harrier in defence of nest or young, he has not seen this action—'folding its wings towards its body and dropping steeply'—used as a hunting method. He also knows of no account of such hunting behaviour, although the word 'stoop' was used to describe a Hen Harrier attacking a Red Grouse *Lagopus lagopus* (*Brit. Birds* 57: 4); he added that Hen Harriers often pursue small birds in flight for short distances, generally close to the ground, but a pursuit of about 800 m at a height of up to 40 m is unusual. Eds

Hen Harrier apparently attempting to catch fish In view of correspondence regarding Marsh Harriers *Circus aeruginosus* hunting over water (*Brit. Birds* 71: 307, 589), the following may be of interest.

At 09.50 GMT on 26th December 1978, I watched a near-adult male Hen Harrier *C. cyaneus* passing along the eastern edge of a Pennine reservoir which is flanked by a narrow conifer belt and surrounded by open hill pasture. The harrier's progress was impeded by persistent, spectacular mobbing by two Sparrowhawks *Accipiter nisus*, inducing equally spectacular evasive action over and through the upper canopy of the conifers. The harrier eventually crossed the open water of the reservoir at a height of about 3 m and hunted on a generally southerly beat over land south of the reservoir, disappearing from view at 10.00 hours.

About 25 minutes later, what was presumably the same harrier crossed the reservoir from the south at a height of about 1 m. On reaching the northern shore and gaining height, it was again attacked by the Sparrowhawks for about one minute while over the plantations. Evasive action, which took it out over 18 Mallards *Anas platyrhynchos* resting on the water, did not occasion them any alarm, but the harrier was mobbed for a further three minutes by an adult and a juvenile Herring Gull *Larus argentatus*. The two gulls eventually gave up and the harrier returned to the northeast corner of the reservoir, quartering the narrow perimeter strip, which is usually bereft of birds. After about five minutes, it moved out across the open water on a southerly track, into a light breeze which was just rippling the water surface. On five occasions, while flying at a height of 1-2 m, it lost flight speed, almost hovered, and plunged feet-first quite slowly into the water, immersing its legs and thighs completely, with tail lying on water surface while keeping its wings clear of the water and beating steadily. It lifted cleanly out of the water after each immersion without any prey and eventually reached the south bank, where it landed. It subsequently flew out over the water three more times, but did not enter the water again.

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Donald Watson has commented as follows: 'I have not myself seen Hen Harriers fishing or attempting to take fish, but the following observations are relevant:

(1) A. K. McCrone told me about two years ago that at Loch Ken he had seen a Hen Harrier fly down and take a small fish, probably a perch *Perca fluviatilis*, which an angler had caught and left lying on the bank.

(2) In about 1960, when Hen Harriers were beginning to nest on a kept moor in Galloway, a gamekeeper set traps baited with dead fish among the boulders in a burn and caught two Hen Harriers.

(3) Another gamekeeper has told me that he thought a male Hen Harrier was taking dead, stranded fish, near the River Ken.

(4) There are several old accounts of Hen Harriers taking dead fish, and migrating harriers, probably Pallid Harriers *C. macrourus*, have been observed pursuing and catching flying-fish over the Red Sea, which I quoted in my book *The Hen Harrier* (1977, pages 105 & 27).

'I cannot cite proof of Hen Harriers capturing live fish. Mr Rhodes's account certainly suggests an attempt to lift something from below the surface. I do not doubt that fish put back from keep-nets by anglers, such fish sometimes being dead, could be an attraction to a harrier; and one might even try for a live fish below the surface, as is suggested by Mr Rhodes's note.' EDS

Osprey fishing from perch In May 1977, in Menorca, I was watching an Osprey *Pandion haliaetus* sunbathing on its habitual perch, a large cactus (Cactaceae) on a rocky promontory overhanging an inland lake. It leant forward with sudden interest, dropped into the water and carried off a large mullet (Mullidae). Leslie Brown (1976, *British Birds of Prey*) stated that, 'its mode of hunting is entirely aerial. It perches much on trees, but it hunts exclusively in flight.'

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Feeding methods of House Sparrows and Chaffinches with pine seeds During winter 1977, in Rome, Italy, House Sparrows *Passer domesticus* of the race *italiae* were observed feeding on seeds of umbrella pine *Pinus pinea* at two different sites. They carried the seed from the tree to a building cornice 4-6 m high, then let it fall on flagstones below; this operation was repeated with each seed until it broke into two halves. All the seeds eaten by each sparrow were always dropped in the same place. Both sites were used by sparrows for about one month. The 285 empty seed halves gathered at one indicate that pine seeds formed only a fraction of the diet of these sparrows.

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During November-January 1973/74, a small flock of Chaffinches *Fringilla coelebs* fed on umbrella pine seeds in the garden of a farmhouse near Rome. The garden consists of evergreen bushes, some tall umbrella pines and holm oaks *Quercus ilex*. The ground under the tree is partially covered with grass and stone lambs. Five or six Chaffinches would move along the branches of the pines to reach the mature, open cones and draw out the seeds with their bills (in the same manner as a Crossbill *Loxia curvirostra*). They then dropped the seeds over the stone lambs, from a height of 6-7 m. The seeds divided into two and the finches alighted on the ground to eat them. If the seed did not break, they repeated the operation until it did.

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Rufous-sided Towhee in North Humberside On 5th September 1975, B. R. Spence was checking mist-nets which had been set to catch migrant Swallows *Hirundo rustica* near the bird observatory at Spurn, North Humberside. He found that one net held two Swallows and a rather colourful, unfamiliar species. The bird was patently not a European or western Asiatic species. Various books were consulted, first of all on cage birds and then on birds of North America. Very soon, it became obvious that the bird was in fact a Rufous-sided Towhee *Pipilo erythrophthalmus*, and, surprisingly, of one of the western races.

After being examined and released, the towhee was not seen again until 13th September, when it was found on the edge of a dense patch of sea-buckthorn *Hippophae rhamnoides* by the seashore about 200 m to the south, where it had probably been seen fleetingly on 27th August. There it remained until 10th January 1976, favouring the side of a low, collapsed sand-dune on the seaward edge of the sea-buckthorn, often feeding on the tide wrack at its base, especially under cover of bushes that had been washed down by waves. The buckthorn area soon became known as the 'Towhee Patch'. Occasionally, the towhee returned to the area where it had been caught, and was retrapped several times. In December, it began to frequent a short turf area bounded by thick sea-buckthorn near a house trap. It soon learnt to enter and leave the trap, as do the local Dunnocks *Prunella modularis*. It was very wary, however, and left the trap as soon as anyone started to approach it.

On the night of 3rd January 1976, there was an extremely high tide, which washed away its favourite sand-dune and the eastern edge of the Towhee Patch, filling much of what remained with sand and wrack. Despite the changed habitat, the towhee was seen nearby on 4th and again on 10th January, but not subsequently; it seemed strange that it did not return to the house trap area when its preferred area had been altered.

The towhee was very secretive, usually staying in cover. The only times it was seen to fly were on release and when it left the house trap. If approached too closely, or if there were many people (birdwatchers or day-trippers) on the beach, it just seemed to fade away, and was not seen to move into cover.

The following details were noted in the hand:

Whole of head, nape, chin and upper breast sooty-black. Back, rump and upper-tail-coverts black, with slight gloss and very narrow buff fringes to tips of feathers. All wing feathers sooty-black, with very narrow whitish fringes to distal half of outer web of outer primaries. White tip to outer web of greater and median coverts; white outer web to distal two-thirds of scapulars; smallest tertials with pale buff elongated spot on outer web. All tail feathers black, with distal third of inner web of outer feather white, and narrow white fringe to distal third of outer web; penultimate feather with large white spot on inner web; next feather with small

white spot on inner web. Flanks rufous (bright chestnut); undertail-coverts buffish-chestnut; rest of underparts white. Upper and lower mandibles very dark horn. Legs and feet horn-coloured. Iris orange, with pale buff outer ring.

In active moult on 5th September, with outer six primaries and outer two secondaries new; rest of primaries, score 2-4; rest of secondaries, score 3-4. Central three pairs of tail feathers new; other three, score 2-4. Whole of underparts and upperparts (except scapulars and upper-tail-coverts) in moult. On 14th December, all upperparts black-and-white, except for very narrow pale brown tips to outer

uppertail-coverts; tertials had cream edge, and rusty tip to outer web.

Wing 86 mm. Tail 96 mm. Tarsus 29 mm. Bill to skull 18 mm; to feathers 13 mm. Weight 43.5 g at 12.00 GMT on 5th September; 43.5 g at 08.00 on 19th; 42.6 g at

07.00 on 30th; 45.0 g at 08.00 on 7th October; 53.0 g at 17.00 on 27th; 48.8 g at 11.00 on 18th November; 49.0 g at 13.00 on 14th December; 49.0 g at 12.00 on 17th December.

Initially, there were differing opinions as to whether the towhee had escaped from captivity or was a genuine wild bird. Subsequent enquiries indicated that the bird was not known to be kept as a cage-bird. Since the previous British record of Rufous-sided Towhee, on Lundy, Devon, in 1966 (*Brit. Birds* 63: 147-149) had been accepted for the British and Irish list, the Spurn record was submitted to the *British Birds* Rarities Committee.

In spite of the detailed plumage description and photographs which were examined by Ned K. Johnson of the University of California, the Spurn individual could not be assigned to any particular population, as the western races of the species have been described primarily on the plumage of the female and the size of the feet (NKJ *in litt.*). Could the bird have been from the northern population, *arcticus*, and have been a genuine vagrant coming to Britain by a northern route?

J. V. Tranter, who had kindly checked on the cage-bird situation, felt that the fact that the bird was a western one made it a little suspect and suggested that it could be from a southern population and imported into Britain from Mexico or Central America. Strict regulations in the USA and Canada made imports from there very unlikely. J. Davis (*in litt.*), who has worked on towhees in California (Davis 1957), was of the same opinion, and ventured the suggestion that a towhee was about as well-designed as a cannonball for overwater flight. Then came news from T. P. Inskipp (*in litt.*) during his investigations for the RSPB into the importation of birds:

'A consignment of birds was imported from Canada on 25th January 1975 to Heathrow, bound for Leicester, which contained ten Rufous-sided Towhees, along with Varied Thrushes [*Zoothera naevia*], Brewer's Blackbirds [*Euphagus cyanocephalus*], Pine Siskins [*Carduelis pinus*], Oregon Juncos [*Junco hyemalis*], Swamp Sparrows [*Zonotrichia georgiana*] and Mealy Redpolls [*C. flammea*] (56 birds in all). These were subsequently advertised in *Cage and Aviary Birds* of 24th April 1975 including "Arctic Towhee cocks" at £12.00 each. They were apparently almost certainly exported from Canada illegally as "canaries" or some other species commonly bred in captivity! Judging from adverts., this is still happening. That is the background information, but, needless to say, it is impossible to discover where the birds went to from Leicester or whether any escaped subsequently.'

In view of this last information it seems that the Spurn bird was almost certainly one of the Leicester imports and, after all, did belong to the northern race, *arcticus*. The species' limited movements in North America, the fact that it may not be capable of making any sustained flight (though other species with apparently weak flight make long-distance movements) and the facts that it has not been included in lists of migrants resting on board ship (Durand 1963, Macarthur & Klopfer 1958) or in surveys of North American species in western Europe (Alexander & Fitter 1955, Nisbet 1963) suggest that the Rufous-sided Towhee should perhaps be demoted in the British and Irish list from Category A to Category D.

I wish to thank Ned K. Johnson and J. Davis for advice on the western

races; and J. V. Tranter and T. P. Inskipp for information on cage-birds and imports.

JOHN CUDWORTH

17A Prospect Road, Ossett, West Yorkshire WF5 8AE

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The BOU Records Committee is currently reviewing the status of Rufous-sided Towhee on the British and Irish list. EDS

Fifty years ago . . .

'When we arrived on the grounds at the close of the month—we had been unavoidably delayed by the procrastinations of our Indian guide for more than a week—we found the Greater Yellowlegs evenly distributed throughout the territory.' (*Brit. Birds* 23: 16, June 1929)

Letter

Checklist numbering The Ornithological Records Committee of the London Natural History Society is proposing to adopt the new Voous listing sequence in the next *London Bird Report* (no. 43, for 1978). To facilitate the work of recorders, each species will be numbered sequentially to a basic list of species that have occurred in the British Isles this century (1901-77). The Committee will be pleased to hear from any other societies or county organisations using, or proposing to introduce, species-numbering in their publications.

K. C. OSBORNE

Editor, London Bird Report, 8 Ellice Road, Oxted, Surrey RH8 0PY

Standard numbering in systematic lists of bird reports can be helpful to their compilers and to researchers extracting data from them for analysis, but gaps in the numbering appear surprisingly quickly if the original list is too restricted. We hope that other recorders do contact Mr Osborne, but urge that any agreed list should be sufficiently complete to avoid built-in obsolescence; perhaps the present list of birds of the western Palearctic would serve the purpose? EDS

Diary dates

This list covers events taking place during July 1979 to June 1980. We welcome the submission of details for possible inclusion in the next list, covering January to December 1980.

22nd June-4th July SOCIETY OF WILDLIFE ARTISTS ANNUAL EXHIBITION. The Mall Galleries, The Mall, London SW1. Open 10-5 Mon.-Fri.; 10-1 Sat.

10th July BRITISH ORNITHOLOGISTS' CLUB. W. G. Harvey on 'Ornithology in Indonesia' (including aspects of conservation). Central London. Non-members should write (enclosing SAE) to hon. secretary, c/o P. Hogg, 33 Vine Court Road, Sevenoaks, Kent.

18th September BOC. E. F. J. Garcia on 'The birds of Gibraltar'. Central London. Applications to hon. secretary.

22nd September RSPB MEMBERS' DAY. University of Kent, Canterbury. Tickets and details from RSPB, Scan House, 4/8 Church Street, Shoreham-by-Sea, West Sussex.

29th September RSPB MEMBERS' DAY. The University, Owens Park, Manchester. Speakers include Ian Prestt and Roger Lovegrove. Tickets (£6.50) and details from RSPB, 'E' Floor, Milburn House, Dean Street, Newcastle on Tyne.

1st-5th October XIV CONGRESS OF THE INTERNATIONAL UNION OF GAME BIOLOGISTS. New Arts Block, Trinity College, Dublin. Post-congress excursion 6th-9th October. Congress fees £67.50, travel and accommodation extra. Details and application forms from Secretariat, c/o Fergus O'Gorman, 44 Northumberland Road, Dublin 4, Ireland.

6th October RSPB MEMBERS' DAY. Angus

Hotel, Dundee. Speakers include Frank Hamilton, Mike Everett and Don Macaskill. Tickets (£5.50) and details from RSPB, 17 Regent Terrace, Edinburgh EH7 5BN.

13th October RSPB LONDON DAY AND AGM. Queen Mary Suite, Cunard Hotel, Shortlands, London W6 8DR. Speakers include Sir Peter Scott and Derek Barber. Tickets (£8.00; admission to AGM free to members) and details from Conference Secretary, RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

26th-28th October SCOTTISH ORNITHOLOGISTS' CLUB ANNUAL CONFERENCE. Marine Hotel, North Berwick, East Lothian. Applications to SOC, 21 Regent Terrace, Edinburgh EH7 5BT.

27th October RSPB MEMBERS' DAY. Wessex Hotel, West Cliff, Bournemouth. Speakers include Richard Porter, James Cadbury, Rob Hume and Mike Everett. Tickets (£6.00) and details from Conference Secretary, RSPB.

2nd-4th November BOU ANNUAL CONFERENCE. 'Bird population studies'. Hayes Conference Centre. Applications to BOU Office, c/o Zoological Society of London, Regent's Park, London NW1 4RY.

20th November BOC. M. E. J. Gore on 'Birds of the Gambia'. Applications to hon. secretary.

30th November-2nd December BTO ANNUAL CONFERENCE. Hayes Conference Centre, Swanwick, Derbyshire. Applications to BTO, Beech Grove, Tring, Hertfordshire HP23 5NR.

News and comment

Peter Conder and Mike Everett

The Ribble saved . . . at a price
Everybody must have been delighted to learn that, after a long and involved battle, 2,200 ha on the Ribble Estuary have been saved from reclamation. For the first time, the Nature Conservancy Council has used its powers of compulsory purchase to save one of Britain's top wildlife sites, with encouragingly firm support from the Government. If this is an indication of future trends, we should all be pleased, but two aspects of the

whole affair still give cause for concern. Originally, the District Valuer put a price of £560,000 on the land; it is believed that the would-be developers paid something like £1,000,000 for it. The story ends with the Government shelling out £1.725 million, so, while the developers may have lost the land itself, they would seem to have made a goodly profit out of the whole affair. What this could mean in terms of future speculative buying of top wildlife sites is only too clear. The

second point is that affairs like this can come about in the first place only because land changes which could be classed as agriculture or forestry are not subject to automatic planning controls: clearly, a loophole exists which must be plugged if similar things are not to happen on other important sites.

Irish Hen Harriers decline The January 1979 issue (no. 19) of *IWC News*, the newsletter of the Irish Wildbird Conservancy, contains the text of a talk given by Liam O'Flynn at the IWC/BTO Conference last October. It shows beyond any doubt that, after a period of expansion and increase during the 1960s, the Hen Harrier *Circus cyaneus* has declined alarmingly in Ireland: while the small numbers in two Ulster counties are holding their own, the survey organised by Liam during 1978 showed that numbers dropped by 75% in Co. Wicklow, 90% in East Cork, West Waterford and South Tipperary and 100% in Co. Kerry. Five possible causes of decline have been ruled out from the evidence available, namely change of habitat, shortage of food, adverse weather in the breeding season, predation by foxes and poisoning by agricultural chemicals. It looks as if human persecution (along the traditional 'anti-vermin' lines) and disturbance are responsible.

Lecturers' Directory Anybody requiring a lecturer might like to know that the 1979 edition of the Council for Nature's *Lecturers' Directory* is now available. It gives the names of 75 people willing to talk on a wide range of subjects and who cover England, Wales and Scotland. There is a subject and area index. It is available (25p including postage) from the Council at the Zoological Gardens, Regent's Park, London NW1 4RY.

Plant Red Data Book The Plant Red Data Book published by the International Union for the Conservation of Nature (IUCN) is now available, price £10 (including postage, though airmail is extra) from TPC, c/o The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB. Compiled by Gren Lucas and Hugh Synge at Kew, it covers 250 of the world's most threatened

species, with detailed case histories for each.

Irish conference The annual Irish conference has become something of an institution now, and that held at the Slieve Donard Hotel at Newcastle, Co. Down, during 2nd-4th March 1979, maintained the high standard we have come to expect from these gatherings. The theme chosen by the RSPB/IWC joint organisers this time was 'a closer look at some of our less common species', with the main lectures being on Shetland birds (Bobby Tulloch), Peregrines (Dr George Luke), Peregrine protection in Scotland (Frank Hamilton), Corncrakes (Michael O'Meara), Choughs (Susan Cowdy) and warblers at Portmore (Harold McBride).

RSPB conference The RSPB held its annual members' conference at Warwick University during 6th-8th April 1979. It is a difficult one to write about, since it actually contained three conferences in one: participants could hear about assorted conservation problems, about more general bird topics or (if they had chosen the right programme) spend most of their time outdoors actually looking at birds. Anyway, it was a roaring success and 'post-convention tours' even included a trip to Majorca. One of the most heartening features, perhaps, was the enormous turn-out at the Saturday afternoon session, arranged for members of the Young Ornithologists' Club. Bill Oddie came along to open this session and must have had a very tired hand at the end of the day from signing so many autographs—as tired perhaps as the hand of ME who, to his discomfort, found himself sandwiched between such real artists as Robert Gillmor and Peter Hayman, drawing Kingfishers and Blue Tits for a seemingly endless procession of small children.

The usual *BB* mystery photograph competition was held. Martin Davies, Robert Gillmor, Peter Hayman, Rob Hume and Tony Prater correctly identified the five birds and, in a draw, Tony won the traditional bottle of champagne.

Clever crows We are always on the look-out for good short note titles: there are some absolute classics, of course, like 'Turnstones feeding on human corpse',

and some nice lesser-known ones such as Doug Weir's 'Grunting by diurnal raptors', but we particularly liked one in *The Auk* (95: 760) entitled 'Crows use Automobiles as Nutcrackers'. This describes Common Crows *Corvus brachyrhynchos* dropping palm fruits *Washingtonia* onto a busy road and waiting for passing cars to break them open, whereupon the birds swoop in to pick up suitable fragments. Actually, this is reminiscent of the behaviour of Carrion Crows *C. corone* in Shetland—and no doubt elsewhere—which often drop large seashells on the roads and await passing lorries. Possibly they have done better at this since the oil boom brought more traffic onto the roads: one of the few species to benefit in any way whatsoever, though.

Two Estonian books The next International Ornithological Congress, to be held in Moscow in 1982, should help greatly in spreading knowledge of the

excellent work being done by Russian ornithologists. One of the main difficulties at present is that the results of research in the USSR are often difficult to obtain. Estonian ornithologists, under the leadership of Professor E. Kumari, have long set an excellent example, by publishing books of scientific papers, with summaries in both Russian and English. The latest two are *Kajakad* (1978, Tallinn, 148 pages) containing seven papers on gull populations, migrations and breeding, and *Lindude Käitumine* (1978, Tallinn, 262 pages), the first of a series of collected papers and notes on bird behaviour, interestingly addressed to bird-lovers, as well as ornithologists. Once again, Professor Kumari and his colleagues merit our congratulations. (Contributed by SC)

New Gloucestershire recorder C. M. Swaine has retired as bird recorder for Gloucestershire; his successor is John D. Sanders, 129 Estcourt Road, Gloucester.

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

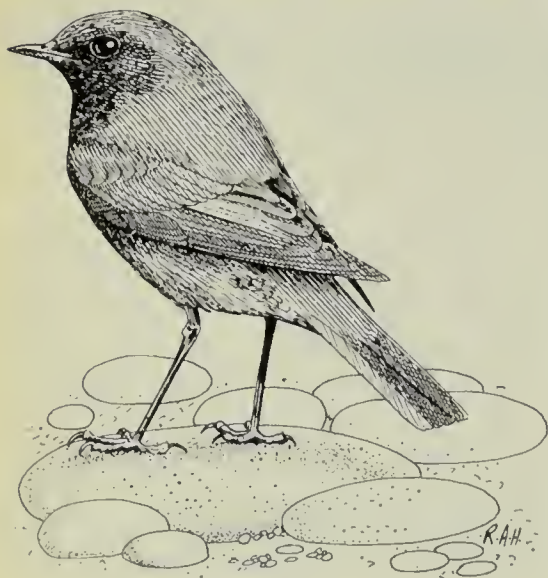
K. Allsopp and S. C. Madge

These are largely unchecked reports not authenticated records

This report covers March, but also includes some February and early April records; except where otherwise stated,

all dates refer to March.

The unsettled, colder-than-average, winter weather continued into March. Overnight frosts and snow showers were frequent, and in late March the trees and bushes were showing little sign of spring growth. During the first 12 days, maximum temperatures exceeded 10° C in the south, when relatively mild air with strong winds arrived from the Atlantic. A few early migrants crossed the Channel, with **Black Redstarts** *Phoenicurus ochruros* and **Pied Wagtails** *Motacilla alba* of the nominate race being found on the Isles of Scilly, **Sand Martins** *Riparia riparia* along the English south coast, and a very early **Whinchat** *Saxicola rubetra* at Staines Reservoir (Surrey) on 7th. On Fair Isle, the only significant passerine movement was of 300 **Skylarks** *Alauda arvensis* on 11th, during the passage of a weather front. High pressure in mid





151. Adult male Barrow's Goldeneye *Bucephala islandica*, Kent/East Sussex, March 1979 (Royston K. Coles)

Atlantic blocked the flow of westerlies on 13th, and very cold Arctic air once more brought snowy conditions. On 18th, temperatures recovered as the winds turned southerly, and **Wheatears** *Oenanthe oenanthe* were reported in small numbers on the following days, together with more **Black Redstarts** and nominate **Pied Wagtails**. These species reached Fair Isle from 25th, the warmest and most favourable day for the arrival of spring migrants. Other species reported were a **Ring Ouzel** *Turdus torquatus* at Kelling Hard (Norfolk) on 25th, **Swallows** *Hirundo rustica* on the Isles of Scilly on 24th, and at Stiffkey (Norfolk) on 26th, and a very early **Spotted Flycatcher** *Muscicapa striata* in Cornwall on 23rd. From 27th, strong northerly winds inhibited further arrivals. **Chiffchaffs** *Phylloscopus collybita* are normally heard before they are seen, but this year the few individuals reported at expected inland migration localities were too busy searching for scarce insect food to give voice. One was heard as early as 25th February at Barassic (Strathclyde), but this was probably an overwintering individual. Fair Isle reported its first on 26th. An early **Cuckoo** *Cuculus canorus* was seen at Scarborough (North Yorkshire) on 5th April, and a very unusual record from the same area was of a **House Martin** *Delichon urbica* on 3rd February. The only wayward migrants reported for early April were three **White Storks** *Ciconia ciconia* at Holme (Norfolk) on 7th, followed by another near Kings Lynn (Norfolk) on

11th, and a **Crane** *Grus grus* at Beccles (Norfolk) on 5th.

Wildfowl

Not previously reported this winter was the **Steller's Eider** *Polysticta stelleri*, once more staying off South Uist (Western Isles) and seen on 28th February. An adult male **Barrow's Goldeneye** *Bucephala islandica* at Bewl Bridge Reservoir (Kent/East Sussex) (plate 151) is a dubious



152. White-headed Duck *Oxyura leucocephala*, Kent, March 1979 (Royston K. Coles)

candidate for the British and Irish list, but nevertheless a splendid bird to observe and contrast with the common Goldeneyes *B. clangula*. The female **White-headed Duck** *Oxyura leucocephala* at Bough Beech Reservoir (Kent) (plate 152) follows reports earlier this winter of individuals at Pitsford Reservoir (Northampton) and Eye Brook Reservoir (Leicestershire) which were probably recent escapes from captivity. A few pairs of **Garganeys** *Anas*

querquedula arrived on the south coast in early March, and one pair was seen at Donna Nook (Lincolnshire) on 28th.

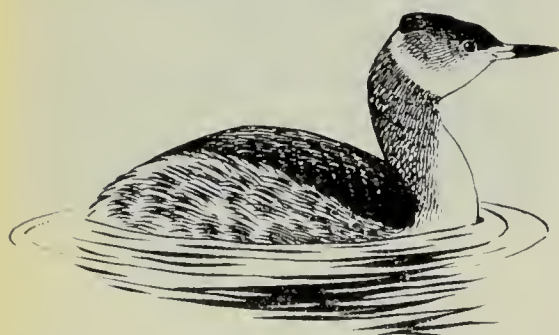
Gulls

Glaucous *Larus hyperboreus* and **Iceland Gulls** *L. glaucoideus* were reported to be scarcer than usual in Scotland, but March reports suggest more than normal in the south and west. Of the latter, three were seen in Mounts Bay (Cornwall) and, inland, two from Andenshaw Reservoir (Manchester) and singles at Blithfield Reservoir (Staffordshire) and Swithland Reservoir (Leicestershire). **Little Gulls** *L. minutus* showed some movement, with 210 invading St Ives Bay (Cornwall) on 27th. Of the rarer species, two **Ring-billed Gulls** *L. delawarensis* were still present in Mounts Bay on 23rd, an immature **Laughing Gull** *L. atricilla* was identified at Donna Nook on 24th February and an **Ivory Gull** *Pagophila eburnea* at Bridlington (North Humberside) on 1st. An oiled **Sabine's Gull** *Larus sabini*—very rare inland—was a surprise visitor at Hoveringham (Nottinghamshire) on 10th February.

Interesting reports of other seabirds were of a **Manx Shearwater** *Puffinus puffinus* of the race *mauretanicus* feeding off Flamborough Head (Humberside) on 3rd and 4th, and a **Sandwich Tern** *Sterna sandvicensis* in Pegwell Bay (Kent) on 24th February.

Aftermath of the February blizzards

The total number of **Red-necked Grebes** *Podiceps grisegena* forced inland after the



blizzard of 15th February will probably reach a few hundred when the final count is made (see 'Request' 72: 241-242). Most inland waters reported one or two and many remained into March, with fortunately only a few having been found dead. Three reached Ireland where the species is a rare find. The numbers of



Black-throated Divers *Gavia arctica* sheltering inland was greater than early reports indicated. Five still remained in Gloucestershire during March, but mortality will probably prove to have been high, judging from the reports of dying birds. The largest concentration reported was in Gerrans Bay (Cornwall), where 52 were seen on 20th, and a few were recorded on the Irish Sea coast where they are normally rare. Not many **Great Northern Divers** *G. immer* were seen, but there were many **Red-throated Divers** *G. stellata* on inland waters and, sadly, a **White-billed Diver** *G. adamsii* was found dead at Boulmer (Northumberland). Escaping the Continental winter were two **Great Bustards** *Otis tarda* seen at Horsey (Norfolk) on 5th and another at Bacton (Norfolk) on 9th. Potentially the first **Red-throated Thrush** *Turdus ruficollis ruficollis* record for Britain and Ireland was claimed at Newton Longville (Buckinghamshire) on 17th February. Concentrations of **Buzzards** *Buteo buteo* are an unusual sight in the east of England, but, after the severe weather, groups of five were found in Norfolk at Fritton and at Winterton. A wandering **Rough-legged Buzzard** *B. lagopus* was seen at Cropston Reservoir (Leicestershire) in mid March, while others were still present along the English east coast.

Latest news

Third week May. Cley (Norfolk): **Little Bittern** *Ixobrychus minutus*, **Purple Heron** *Ardea purpurea*, **Red-footed Falcon** *Falco vespertinus*, **Wilson's Phalarope** *Phalaropus tricolor*. Suffolk, Minsmere: **Alpine Swift** *Apus melba*, **Bee-eater** *Merops apiaster*; Southwold: **Black Kite** *Milvus migrans*.

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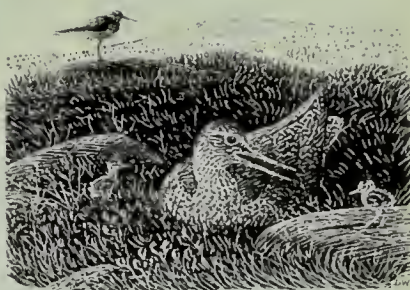
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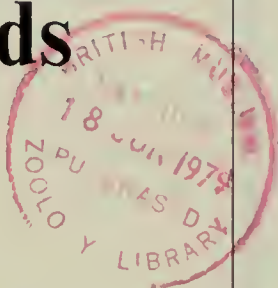
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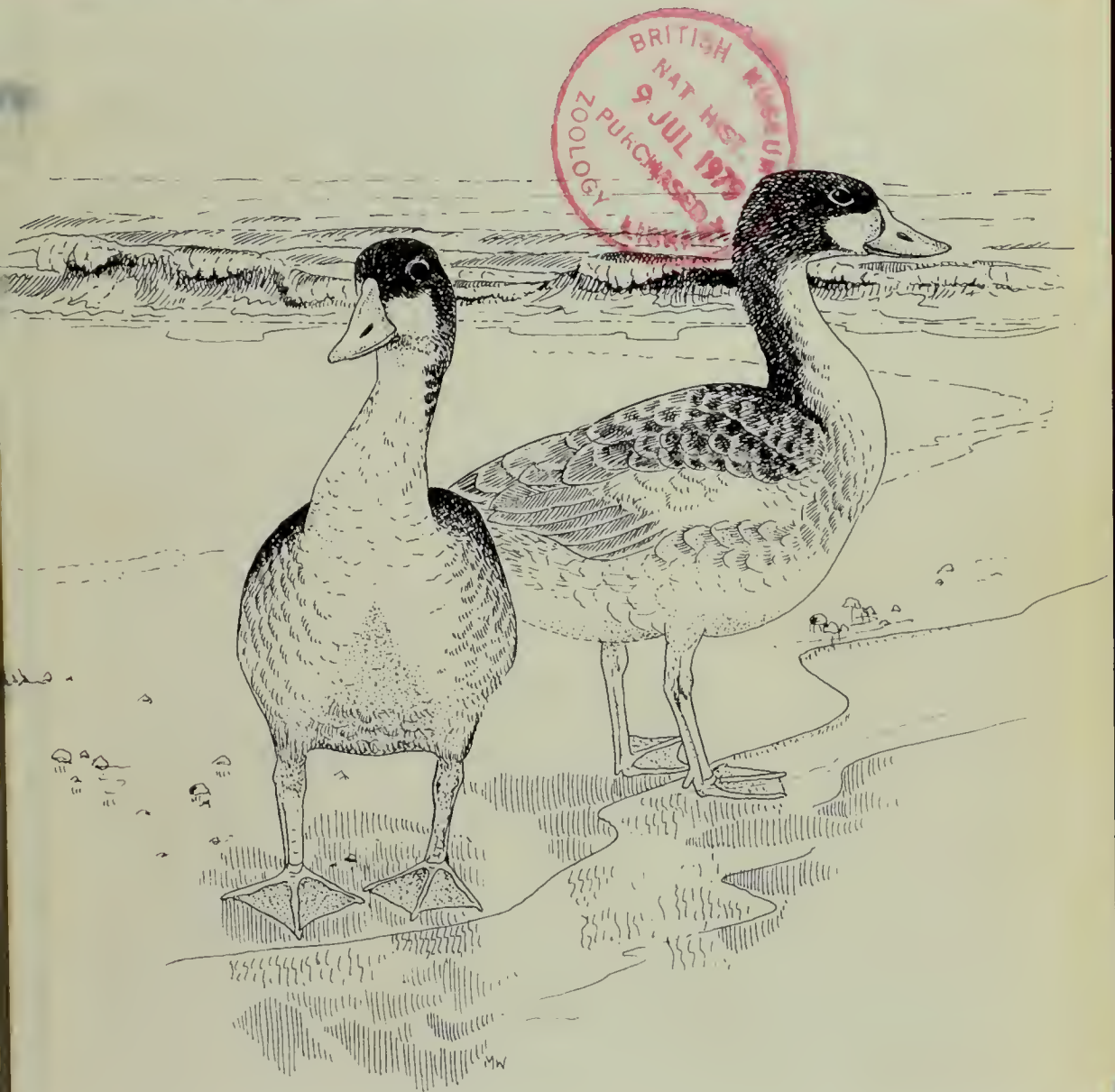
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British Birds

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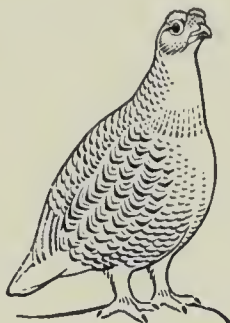
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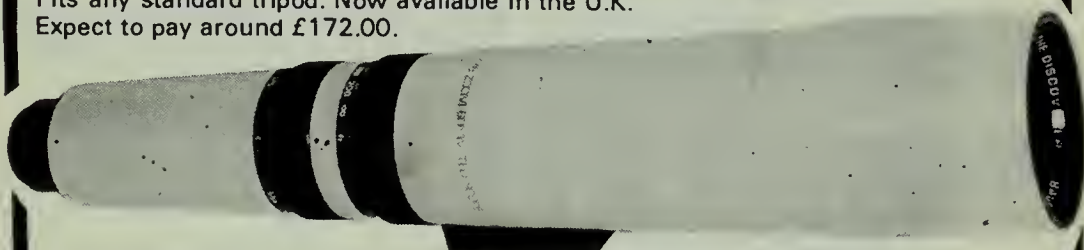
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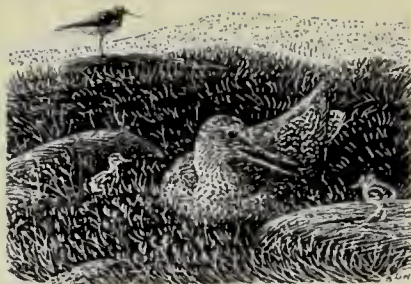
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British Birds

VOLUME 72 NUMBER 7 JULY 1979



Two urban Pied Wagtail roosts

R. J. Chandler



**What benefits are derived from communal roosting?
Why do some birds engage in mass display flights?
Detailed studies can help to answer such questions**

The Pied Wagtail *Motacilla alba* breeds throughout Britain and Ireland; the same race, *yarrellii*, occurs in the adjacent parts of Continental Europe. It is a partial migrant, which winters from southern Scotland southwards to Spain and Portugal and, rarely, North Africa. A large proportion of the Scottish and northern English populations move south in autumn, while smaller numbers from southern Britain are migratory; first-autumn individuals show a marked tendency to move farther than adults (Davis 1966). During winter, the non-migrating wagtails are joined by migrants, and both use communal roosts (Broom *et al.* 1976), which are often notable for being in highly urban or unusual man-made sites (e.g. Moffat 1931, Boswall 1966a, b).

Recent studies of Pied Wagtail roosts have aimed at establishing why birds use communal roosts (Zahavi 1971, Broom *et al.* 1976). As a result of this work, and that of Ward (1965) on the Red-billed Quelea *Quelea quelea*, it is now generally accepted that birds using communal roosts could benefit by gaining access to food supplies: an individual that found insufficient food one day might, on the next, accompany others leaving the roost, and so be led to a new food source.

Strong support for these ideas is provided by the observation that there is a correlation between those species which have easily found, reasonably constant food supplies and those which roost singly or only in small groups; on the other hand, those species which have fluctuating and more

patchily distributed food sources tend to roost communally. For instance, among the finches, Newton (1972) cited Bullfinch *Pyrrhula pyrrhula*, Hawfinch *Coccothraustes coccothraustes* and Crossbill *Loxia curvirostra* as examples of the former, and Greenfinch *Carduelis chloris*, Linnet *C. cannabina*, Chaffinch *Fringilla coelebs* and Brambling *F. montifringilla* as examples of the latter.

Moreover, Ward (1965), for the quelea, and Broom *et al.* (1976), for the Pied Wagtail, have observed that some individuals, on leaving the roost, move only a short distance before waiting to fly up to join others which leave rather later and apparently fly directly to their feeding areas. This is suggested as the mechanism by which information concerning food supplies is transmitted.

An alternative hypothesis was put forward by Wynne-Edwards (1962), that the prime function of communal roosts is as a means of population control: the birds sense—perhaps as a result of elaborate pre-roost display flights, such as those of the Starling *Sturnus vulgaris*, or, in the case of the Pied Wagtail, by means of a roost chorus—that the local population is higher than the food supplies can support.

This paper presents the results of systematic year-round counts of two urban Pied Wagtail roosts. These show how the numbers fluctuate with the seasons, how sex and age composition varies during the summer, and how roosting times are affected by the season of year, the weather conditions and perhaps the degree of shelter provided by the roost. It is suggested that, while the present observations certainly do not conflict with Ward's (1965) theory of communal roosting, as a corollary it may be that Wynne-Edwards's (1962) ideas are valid at times of migration or when numbers reach a particularly high level, since pre-roost 'mass flights' by the wagtails are most frequent then. These flights may be a stimulus which encourages migration or dispersion of this partial migrant.

The two roosts

Much the larger of the two roosts studied is at Orpington, Kent. The wagtails roost in bushes of laurel *Prunus* 5 m high and extending over an area of 60 m × 20 m in the grounds of the local municipal offices (plate 153). The site is adjacent to the railway station, and is bounded by a main road. Occupied throughout the year, this is one of the largest Pied Wagtail roosts ever recorded, with the total exceeding 3,000 on a number of occasions, and reaching 4,300 in February 1977. Counts at Orpington started in September 1974 and covered the three-year period up to the end of June 1977, with some additional data up to the end of July 1977.

Two years (1975-77) of comparative data are available for the second roost, in plane trees *Platanus* in Buckingham Palace Road, Central London (plate 154). This roost is much smaller, reaching something over 300 birds in both years, and is used only during the winter. In both years, counts started in late September.

At Orpington, the wagtails are invisible once they have entered the roost. At Buckingham Palace Road, they occupy the upper parts of the planes, which provide an exposed roost from the end of November when



153. Roost site of Pied Wagtails *Motacilla alba* in laurels *Prunus*, Orpington, Kent
the leaves have fallen; they are, however, relatively inconspicuous for, except when entering the roost, they keep very still and quiet and, at a casual glance, are easily confused with the spherical fruits of the plane trees (plate 155). There is no record of this latter roost being used before March 1973, when there were 60-80 wagtails present (*London Bird Rep. for 1973*).

Although now so large, the Orpington roost appears to have been in use only since about 1971, although it may be older; there were about 60

154. Roost site of Pied Wagtails *Motacilla alba* in planes *Platanus*, Buckingham Palace Road, Central London





155. Pied Wagtails *Motacilla alba* roosting in a leafless plane *Platanus*, Buckingham Palace Road, Central London, December 1975

wagtails there in late October 1972 (D. J. Montier *in litt.*). It is probably significant that another roost, at Ruxley Gravel-pits, 4.5 km to the north-east, although in regular use since autumn 1964 and holding up to 300 wagtails, was not used after spring 1971 (F. J. Holroyde *in litt.*). This suggests that the gathering area for the Orpington roost had a radius in excess of 4.5 km, for it seems likely that the wagtails abandoned Ruxley in favour of Orpington.

At Orpington, the wagtails congregate in the vicinity of the roost, particularly on flat-roofed buildings, for up to an hour before roosting. Most sit motionless, facing into the wind, although some, more often in autumn and spring, will feed and preen before moving on to the roof of the building directly overlooking the roost, from which they fly down into the laurel bushes.

A similar pattern of arrival occurs at Buckingham Palace Road, where the wagtails congregate on the roofs of the buildings adjacent to the roost trees. In early autumn, while the leaves are still on the trees, they use the roof of Victoria Station before flying directly across the road into the trees. After the leaves have been shed, they gather somewhat farther from the roost, using the flat and much higher roofs of the Air Terminal and Coach Station, although still within a few hundred metres of the roost (see plate 154).

Counting methods

At Orpington, counts were made weekly so far as possible; the corresponding interval at Buckingham Palace Road was ten days. At both sites, the

wagtails were counted as they flew into the roost.

At Orpington, they usually finally flew into the laurel bushes from the building directly behind, most being momentarily silhouetted against the western sky. With relatively low numbers, up to perhaps 500, individuals could be counted and the totals are likely to be accurate; when large numbers were using the roost, it became necessary to count in tens, and on occasions even in fifties, and the totals are best regarded as good estimates. Although the absolute totals may be in some doubt, the errors are likely to be consistent, since I made all the counts myself; hence, any apparent increase or decrease from one week to the next will represent a real change in numbers, although its magnitude may not be correct.

At Buckingham Palace Road, individuals could always be counted as they flew into the roost tree; these totals can be regarded as accurate.

Counts were recorded over five-minute periods, so roosting times, as well as numbers, were known.

Seasonal variations in numbers

The seasonal variations in numbers at the roosts are best examined over the period from July to June (figs. 1 & 2). During the breeding season, the Orpington numbers were low, while the Buckingham Palace Road roost was not used at all. From early June, the first juveniles appeared at the Orpington roost; the increase was small until the end of July, when, in both 1975 and 1976, the numbers approximately trebled, then remained roughly constant until the third week of September, when they again rose. This spectacular increase in 1975 and 1976 was presumably the result of successful breeding in those two fine summers; it was much more steady in 1974, and (not shown in fig. 1) also in 1977.

Counts in Hyde Park and Kensington Gardens in Central London, 23 km northwest of the Orpington roost, suggest that migrant Pied Wagtails generally start passing through the London area in early September. The results of these counts, made almost daily and for which I am indebted to D. J. Boyd, are shown in fig. 1 as the number of bird-days summed over seven-day periods during September to November in each of the three years. These histograms do not show the absolute numbers of migrants passing through the two parks, since one or two wagtails are present on most days of the year, but the period of passage is clear. Thus, the increase at Orpington in late September seems almost certainly to be the result of an influx of migrants, while the rapidity of the influx in the last two years suggests that at least a proportion of those involved in the influx had occupied the roost in the previous year.

In 1974, the rate of increase was roughly constant, suggesting that in that year many of the arriving migrants remained in the roost and wintered in the Orpington area, and that perhaps only limited numbers used the roost merely as a temporary staging post. The roost was, however, apparently extensively used as a staging post in both of the final two years, when there were noticeable October peaks. The behaviour at the roost, discussed later, also supports the idea that fewer of the arriving migrants used the roost as a staging post in 1974. The regular use of existing roosts as

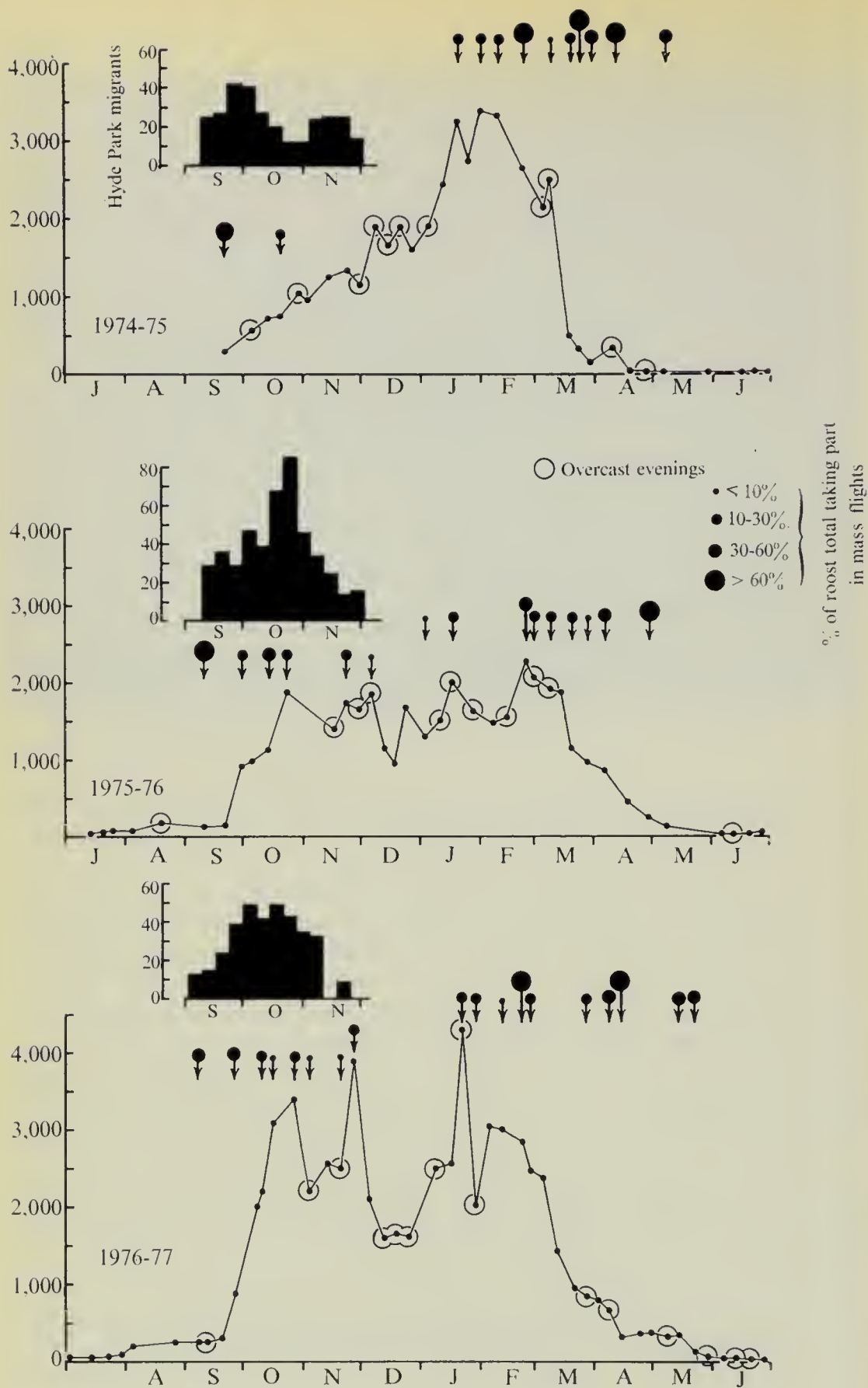


Fig. 1. Numbers of Pied Wagtails *Motacilla alba* in the roost at Orpington, Kent, 1974-77. Solid circles indicate proportion of birds in roost taking part in 'mass flights' at date shown (where no arrow, mass flights were not observed). The histograms show number of bird-days in seven-day periods recorded for migrant Pied Wagtails in Hyde Park/Kensington Gardens, London

staging posts is probably common, since peak counts occurred during the September to November period at a number of roosts reported by Boswall (1966a).

During December, numbers either fall or remain roughly constant, thereafter rising again; thus, the main peak was recorded in late January or February in each of the years. From February, numbers fall, most rapidly during mid March, and reach the breeding-season low some time in April or May; the final departure of what are probably local breeders depends on weather conditions during this period. In 1977, for example, a period of cold northeasterly winds delayed this final departure until nearly the end of May; consequently, the June-July build-up of juveniles was noticeably later than in the previous years (fig. 3).

Similar population trends to those observed at Orpington can be seen in the two year-round counts of a wagtail roost near Reading, Berkshire

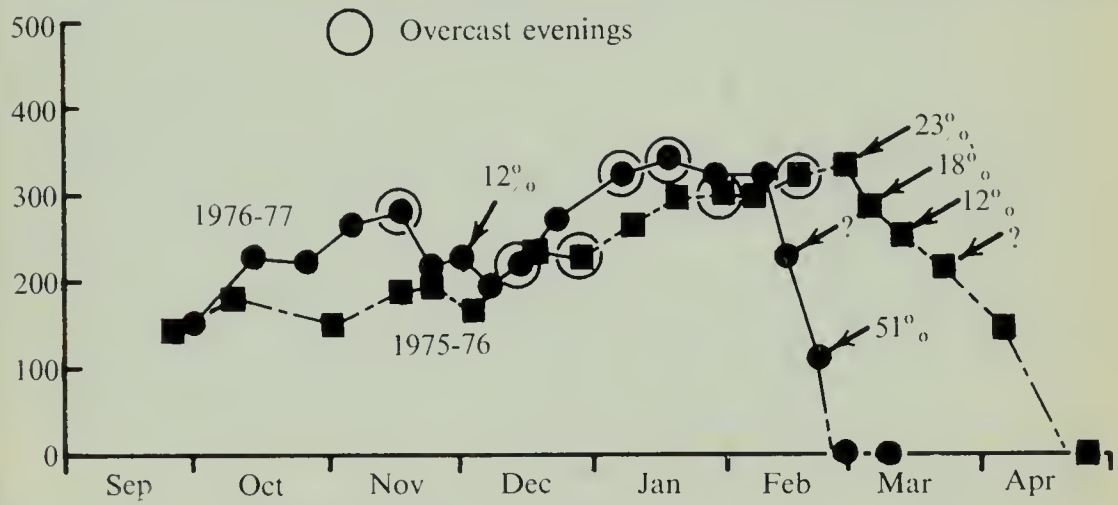


Fig. 2. Numbers of Pied Wagtails *Motacilla alba* in the roost in Buckingham Palace Road, Central London, 1975-77. Arrows show evenings when 'mass flights' occurred from roost trees, with proportion of total roost numbers taking part where this could be estimated

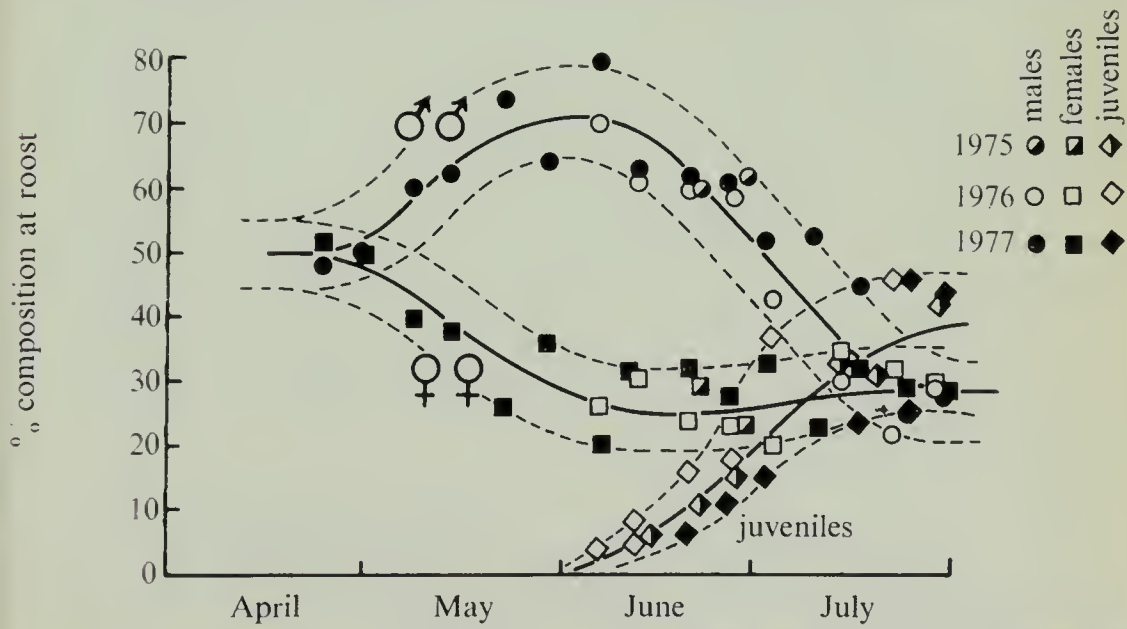


Fig. 3. Relative proportions of male, female and juvenile Pied Wagtails *Motacilla alba* using the roost at Orpington, Kent, during summer

(Broom *et al.* 1976), although the use of a clap-net to trap birds for ringing caused disturbance which may have prevented the roost population from following its natural progression. The Reading numbers, for example, reached a peak in late December, noticeably earlier than in any year at either Orpington or Central London. Broom *et al.* suggested that the December peak at Reading, well after migration, resulted from wagtails moving from smaller roosts in the area; a similar explanation seems likely for the January-February peaks at the two roosts in the present study. By contrast, the London Starling roosts seem to reach a peak in June and July, with the influx of young birds (London Nat. Hist. Soc. 1964).

It is not known precisely when in the autumn the roost at Buckingham Palace Road was reoccupied, but it seems likely that it was in late August or early September. Thereafter, numbers increased fairly constantly, without the dramatic fluctuations recorded at Orpington, until January or February, when they fell sharply; the roost was not used after mid April in 1976 or late February in 1977. In spite of the apparent early abandonment in February 1977, the roost was again being used in mid September 1977.

There is some suggestion (fig. 1) that, at Orpington, dull conditions may result in fewer birds using the roost, although this is by no means invariable; indeed, the highest count was made on an overcast evening. Since few counts were made on wet evenings, the effect of rain on roosting numbers is not really known, but it is possible that, on such occasions, the wagtails may roost closer to their feeding areas. There is no evidence that dull, overcast evenings affected numbers at the Buckingham Palace Road roost (fig. 2); but, again, counts were not carried out on wet evenings.

The Orpington roost during summer

The Orpington roost was used by a few wagtails throughout each of the three summers, the minimum counts being ten on 6th May 1975 (next count on 15th June: 19), 35 on 12th June 1976, and 42 on 20th June 1977. Meiklejohn (1937) reported a summer roost on 28th June 1937, at Llyn Ogwen, Gwynedd, of about 60 Pied Wagtails, the majority of the adults being males; the same applied at the Orpington roost in summer, presumably since many of the local breeding females spent the night on or near their nests. The proportion of each sex at the roost was determined from early June 1976, and on two dates in 1975. This was done on the basis of plumage characters, by observing arriving wagtails and also by periodically counting all those visible during the arrival period. Counting at intervals was necessary to avoid bias, since those females that did use the roost tended to arrive later than males. Juveniles consistently both arrived earlier and entered the roost earlier than adults; the proportion of juveniles was estimated in all three summers.

In fig. 3, the scatter of points in each year probably represents, to some extent, the difficulties of estimating the numbers of the sexes, which were sometimes difficult to separate, while, on a few occasions, the sample identified may not have been representative of the roost as a whole; but it probably also reflects genuine fluctuations in the sex- and age-proportions. The general pattern is, however, clear.

At the end of April 1977, there were equal proportions of the two sexes at the roost; by mid May, the proportion of males had noticeably increased, and it continued to do so until early June, with a maximum estimate of 80% males on 6th June. The first estimate in 1976, again on 6th June, was of 70% males, but there may, of course, have been an earlier maximum. In early June, the first juveniles, apparently now independent of their parents, appear at the roost, and from then on their proportion steadily increases. After the end of July, both adults and juveniles have begun their autumn moult (body moult only in the case of juveniles), and it became less easy to distinguish adult females from those in first-autumn plumage; the data shown in fig. 3 are therefore not plotted beyond the end of July.

It is worth noting that the majority of Starlings using Central London roosts in late April, when numbers reach a minimum, are also males, which are thought to be non-breeding first-years (London Nat. Hist. Soc. 1964).

Mass flights

Mass flights occurred from time to time at both roosts. These take place either from the roofs of the buildings adjacent to the roost, or from the roost itself. The wagtails rise simultaneously, without any obvious external disturbance, and fly over the roost site in a roughly circular flight 200-300 m in diameter in a moderately tightly packed flock; some individuals return to where they started, but others alight on roofs within a few hundred metres of the roost, and still others enter the roost.

On evenings when flights took place, the wagtails were easily disturbed by sudden noises, such as the klaxon of a train or a passing motorcycle; when so disturbed, the flights were less ordered, and most frequently took the form of a mass exodus from the roost directly on to the roof of the building behind (disturbed flights are not included in the subsequent analyses). There is nothing exceptionally dramatic about the flights, and they cannot be compared with, for example, the spectacular aerial evolutions of roosting flocks of Starlings.

Up to 12 mass flights were observed on any one evening, and the number of wagtails involved in a flight varied from seven or eight to about 1,000 (22nd February 1977) and 1,500 (21st February 1975).

The occasions when mass flights occurred are indicated in fig. 1, together with estimates of the numbers of wagtails involved as a proportion of the totals present at the roost. In both 1975 and 1976, flights first occurred about 10th September, before the first influx of migrant wagtails, and continued regularly until late November or early December. In 1974, however, when the influx of migrants was much more gradual, very few mass flights were observed. Indeed, because of the relative lack of activity at the roost during this period, it was possible to count both arriving wagtails and those flying into the roost; the respective totals were usually within 10% of one another. Such sophistication in counting later became impossible, and, on two or three occasions, counts were abandoned owing to the wagtails' extremely disturbed behaviour.

The seasonal pattern of the occurrence of mass flights is examined in table 1 on a monthly basis, averaged over the three years of observations. In autumn, the number of evenings when mass flights occurred reached a peak of nearly 60% in September and October, corresponding with the peak migration period. After a lull from late November/early December, flights recommenced about mid January, occurring during a maximum of 73% of evening counts in February, when the decreasing number of wagtails at the roost suggests the onset of return migration (although the mass flights continued until well into May in two of the three years).

Although the number of mass flights that occurred on any one evening varied from one to 12, the average of monthly totals did not vary much (4.0 to 5.3), except in April, when it increased to 8.2. The number of wagtails involved in the flights varied approximately in proportion to the number at the roost, except on the one December evening in the three years that mass flights were observed, when they averaged only 13 individuals.

Perhaps the best indication of the intensity of the mass flights is given by the proportion of the wagtails at the roost that take part; this can be estimated only on the basis of the total number in all the flights, as there is no way of knowing how many take part in more than one flight. The result of this analysis is shown in fig. 1, and is averaged over the three years in table 1: the peaks of activity in proportion to the total numbers present are in September and April, with a lesser peak in February.

Table 1. ‘Mass flights’ of Pied Wagtails *Motacilla alba* at the roost at Orpington, Kent, 1974-77: seasonal frequency and numbers of individuals involved

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Number of evening counts, 1974-77	7	4	7	12	11	12	12	11	13	11	7	11
% of evenings with mass flights	0	0	57	58	36	8	42	73	62	45	43	0
Average number of mass flights per evening	0	0	5.0	5.3	4.3	5.0	4.6	5.1	4.0	8.2	4.1	0
Average number of wagtails per flight	0	0	31	62	73	13	83	166	36	33	17	0
% of wagtails at roost taking part in mass flights	0	0	54	20	12	4	15	34	24	67	45	0

At the Buckingham Palace Road roost, little could be seen of the behaviour at the gathering points on the neighbouring buildings, and mass flights were usually observed only if they took place from the roost trees. The behaviour was generally much more orderly than at Orpington; the continuous passage of traffic beneath the roost tree never appeared to disturb the wagtails. In both years, however, they became more excitable towards the end of the period of use of the roost, and mass flights by groups of between ten to 30 wagtails from the roost tree back on to neigh-

bouring roosts occurred several times. All these occasions and the number of wagtails involved are shown in fig. 2; with one exception, these flights were all at times when the numbers at the roost were diminishing rapidly. Otherwise, the apparent absence of mass flights correlates well with the complete absence of sudden changes in the numbers of wagtails using the roost.

The possible significance of mass flights

The following points need to be considered:

- (i) The flights start in mid September and continue until late April or May, thus occurring before and after the two migration periods;
- (ii) they are less frequent between late November and late January;
- (iii) the periods of most intense mass flights occur when numbers are relatively high, or are changing rapidly.

A corollary of Ward's (1965) theory, that communal roosts provide an insurance against individual birds losing their food supply, is that, should the number using the roost significantly exceed the food resources of the area served by the roost, a proportion will be forced to move away from the area. Such conditions will apply not only when large numbers are using the roost, but also when numbers are increasing rapidly, since, at these times, many birds will be new to the area, and the feeding resources known to the limited number familiar with the area may be put under some pressure. Thus, large or rapidly increasing numbers at the roost would act as a stimulus to at least some to leave the area, or, during the periods of migration, to continue their passage. In support of this hypothesis, fig. 1 shows that the high rates of arrival of migrants in the last two years are associated with frequent mass flights, and that from late November onwards these flights occurred most often when wagtail numbers at the roost were particularly high. That increased migration does occur when numbers are high, following a successful breeding season, is shown by the increase of distant ringing recoveries during the subsequent months (Davis 1966).

The mass flights start, however, before the arrival of autumn migrants and continue well after most, if not all, the returning ones have left the area. Thus, they seem likely to act as a more fundamental stimulus or expression of the migration or breeding urge, although the flights themselves may be stimulated by the large numbers or high rates of increase in autumn through to early spring, and in late spring when the breeding urge conflicts with inclement weather.

These observations do not seem to conflict with either of the two hypotheses concerning the function of communal roosting. Rather, it may be suggested that the hypotheses are each corollaries of the other: Ward's (1965) holding when numbers are low compared with the food resources of the area, the relatively small Buckingham Palace Road roost functioning in this manner through much of the winter; while Wynne-Edwards's (1962) hypothesis appears to apply to the large Orpington roost. Indeed, the conclusions to be drawn from the observations of the latter roost are well expressed by Wynne-Edwards's own conclusions: 'At any one roost the displays themselves fluctuate, depending on the season and often on

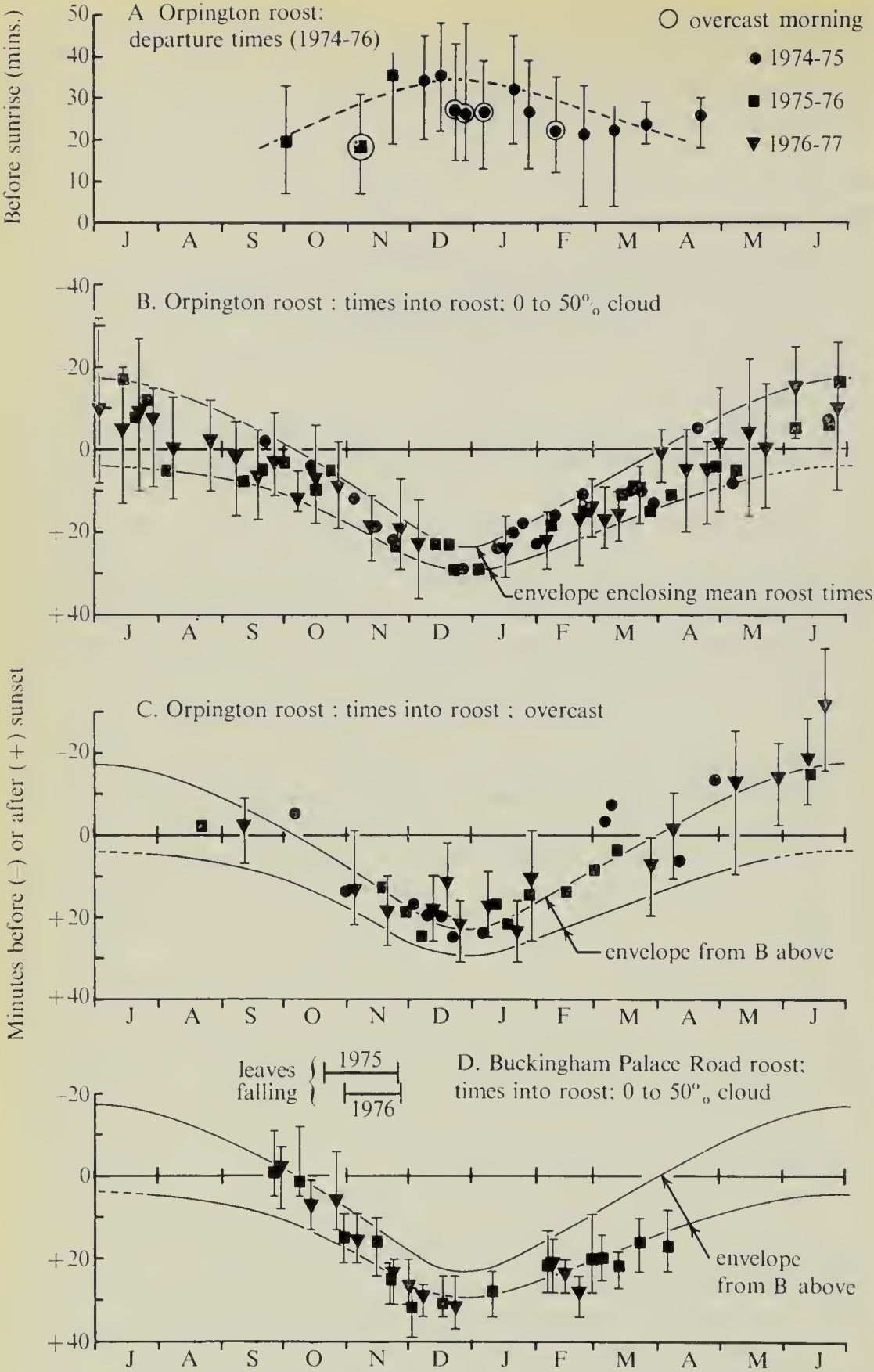


Fig. 4. Roosting and departure times of Pied Wagtails *Motacilla alba* in roosts at Orpington, Kent, and Buckingham Palace Road, Central London, 1974-77. Symbols show mean roosting or departure times (see text), and length of bar the total time period involved. To avoid confusion, bar lengths are plotted only for 1976-77 in B and C

the weather; and their compass and impressiveness are not merely a function of the numbers of birds taking part: in fact there is more than a hint that the intensity is highest at a time when the population is working up to a major change, before migrating or, as migration proceeds, when the group is undergoing a progressive accumulation or turnover. At these latter times . . . the roost system appears capable of acting as a continuous regulator of population-density in its own neighbourhood and of feeding the migrants through the region in an orderly progression.'

Roosting times

By dividing the counting period into intervals of five minutes, it was possible to establish roosting times with some precision. These observations are shown in fig. 4, where the plotted symbol represents the mean roosting time (the time when 50% were in the roost) related to sunset, and the length of the bar the total period of time ('roost entry period') over which the wagtails entered the roost. In fig. 4B, an envelope (drawn by eye) encloses all mean roost times when the cloud cover was 50% or less. The pattern of later roosting relative to sunset in winter than in summer reflects the reduced hours of daylight available for feeding. Mean roosting times are about 21.15 BST (20.15 GMT) in mid summer and 16.20 GMT in mid winter. On completely overcast evenings, roosting times were significantly earlier (fig. 4C).

At Buckingham Palace Road, roosting times are comparable with those at Orpington only while the roost trees retain their leaves; from the end of November, once the trees are bare, the roosting times are significantly later, suggesting that the wagtails are reluctant to enter this rather exposed roost until light intensities have fallen below the values at which they would enter a more secluded roost. Since most roost above street-light level and, moreover, since at the time of roosting the lights make very little impact on the general levels of illumination, it is unlikely that street lighting influences roosting times to any extent.

It appears that the envelope of mean roosting times is not symmetric, but rather that, when comparing times of the year when daylight is of equal length, it indicates later roosting relative to sunset in January-March than during October-December. This is presumably due to the greater scarcity of food, and hence the need for longer feeding time, in late winter.

Departure times from the roost (fig. 4A), although recorded on only a few occasions, are also apparently affected by light intensity. Departure, however, clearly occurs at lower light intensities than does entry into the roost.

Roost chorus

Roost choruses, composed of sustained calling, have been reported from some Pied Wagtail roosts, but not from others, leading Boswall (1966a) to suggest that such group vocalisation may occur seasonally. This is certainly the case at Orpington, where the roost chorus is first heard in mid September, corresponding with the arrival of the first migrants; it then continues every evening until early April, when most of the winter visitors

Table 2. First and last recorded dates of roost chorus of Pied Wagtails *Motacilla alba*, Orpington, Kent, 1974-77

	First date	Last date
1974-75	not recorded	10th April
1975-76	21st September	28th March
1976-77	19th September	8th April

have left and only presumed local wagtails remain. The first and last dates when the roost chorus was observed at Orpington are given in table 2.

The chorus starts at about the mean roosting time and continues, fading gradually towards the end, until a little after all the wagtails have entered the roost. At Buckingham Palace Road, the chorus is developed as the birds call while flying in the roost trees, apparently vying for favoured perches; presumably the same happens, unseen, in the laurel bushes at Orpington. Wynne-Edwards (1962) suggested that the chorus provided the wagtails involved with information on the local population level. The present data suggest an additional function. Fig. 4B shows that the roosting period is rather shorter during September-April, when the roost chorus occurs, than during the remainder of the year. Thus, it could have survival value by not only indicating to other wagtails the whereabouts of the roost (Armstrong 1963), but also by stimulating tardy individuals to enter the roost, thereby reducing their exposure to predators.

Acknowledgements

I am indebted to D. J. Boyd for allowing me to use his counts of migrant Pied Wagtails in Hyde Park and Kensington Gardens, and to the London Borough of Bromley for allowing me access to the Civic Hall at Orpington. Dr D. M. Broom, K. H. Palmer and Dr T. Seller were kind enough to read a draft of this paper, and their constructive criticisms are gratefully acknowledged.

Summary

Systematic, regular counts at two urban roosts of Pied Wagtails *Motacilla alba* show the seasonal pattern of occupancy to be one of complete absence or low numbers during the breeding season, when any present are predominantly males, rising from June to mid August, as juveniles join the roost. There is an influx of migrants from late September, some of which are presumed to use the roost only as a temporary staging-post before moving on. During the winter months, numbers may fluctuate, then fall from late January or February, though many local breeders may not leave the roost until April or even May. The fluctuations in numbers may be associated with mass-flight displays in the immediate vicinity of the roosts, which perhaps stimulate onward migration in spring and autumn, and dispersal during the winter. These observations suggest a link between the two main theories concerning the value of communal roosting: Wynne-Edwards's (1962) theory of population control by communal displays is seen as a possible corollary of the theory that communal roosts enable birds to obtain information on food supplies (Ward 1965), since the presence of large numbers at the roost will overstretch the supplies, thus stimulating the mass flights which lead to dispersal from the roost.

Departure and roosting times are related to light intensity and also to the presence or absence of leaf cover on the roost trees.

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Studies of west Palearctic birds

183 Bald Ibis

Udo Hirsch

The Waldrapp, now known as the Bald Ibis, is the rarest breeding bird in the western Palearctic. It is, debateably, also the ugliest

In the 16th century, the Zurich ornithologist Konrad Gesner reported a strange bird nesting in the rocky walls of the Danube valley at Kelheim and Passau: he named it 'the Waldrapp *Corvus sylvaticus*' (Gesner 1555). It was also recorded breeding at Graz, on the castle rocks at Salzburg, and elsewhere (Schenker 1977). It probably became extinct as a European breeding bird in the 17th century, for reasons largely unknown, though both climatic change and human persecution were perhaps involved (Bauer & Glutz 1966; Schenker 1977). There were even doubts that it had ever existed. Then, in 1824, two 'crested ibises' were collected on the coast of the Red Sea, and, much later, a breeding colony was discovered at Bireçik in southeastern Turkey (Danford 1880), but it was almost the end of the century before it was shown that these ibises were identical with Gesner's Waldrapp (Rothschild *et al.* 1897). Now known as the Bald Ibis *Geronticus eremita*, the species formerly bred in Algeria and Syria (and

Launching this feature in January 1946, B. W. Tucker wrote, 'The series now introduced will aim at providing first-rate camera studies of many of the rarer birds on the British List or of species which . . . are seldom photographed.' In 1954, the title was changed from 'Studies of some species rarely photographed' to 'Photographic studies of some less familiar birds'; we now change it again, so that Kestrel *Falco tinnunculus* and Dunnock *Prunella modularis* are as eligible for inclusion as are Lanner *F. biarmicus* and Black-throated Accentor *P. atrogularis*. EDS



156. Bald Ibises *Geronticus eremita* on old ledge above Birecik, Turkey, summer 1971
(Udo Hirsch)

157. Site of colony of Bald Ibises *Geronticus eremita*, Morocco, spring/summer 1975
(Udo Hirsch)





158. Bald Ibises *Geronticus eremita*, Morocco, spring/summer 1975 (Udo Hirsch)

perhaps Egypt), but now is confined to Morocco and the single Turkish colony. It shares with the Great Auk *Alca impennis* the melancholy distinction of being one of the only two species to disappear from Europe in historic times; now it faces complete extinction. The Bireçik colony held about 1,000 birds during 1911-53 and 600-800 pairs in 1954, then fell rapidly after 1960 to about 65 pairs in 1965, and 23 pairs in 1973 (Weigold 1912-13; Kumerloeve 1956, 1969; Hirsch 1976, 1978). The reasons for this marked decline are unknown, but pesticides used against malaria and locusts are strongly suspected (over 600 Bald Ibises were found dead in 1959-60), while the nests, in a heavily populated part of Bireçik, suffered increasing disturbance (Parslow 1973; Hirsch 1976). In 1972, I was engaged by the World Wildlife Fund to prepare conservation proposals for the Bireçik colony and I studied the birds throughout the 1973 breeding season; in 1975, I visited the main colonies in Morocco, which also appear to be in decline, with about 250 breeding pairs in 1975 (Hirsch 1975, 1976; Cramp & Simmons 1977), and reports of more losses since.

Every year, the first Waldrapps arrive in Bireçik between 11th and 15th February. They fly across the town and briefly circle over the breeding-rock. From day to day, the number of Waldrapps circling over the colony increases and some perch on the breeding-ledge for a short time. At first, they are very shy and disappear at the slightest noise from the people living below the rock. Usually, all will have returned by mid March. Early in the mornings, they come up the Euphrates from the south, where they have spent the night on a rock near the Syrian border, and then fly over the breeding-site for some time. Later on, they fly to the feeding grounds north of Bireçik, where they seek food on untilled fields up to 70 km from the breeding colony. Late in the afternoon, they reappear in Bireçik and, after some circling over the breeding-site, return to their roost in Syria. When nesting starts, they roost on the ledges at the colony, mainly on or beside occupied nests.

In Morocco, there are colonies on the Atlantic coast, at the southern slope of the Atlas, in the middle and the high regions of the Atlas and



159. Bald Ibises *Geronticus eremita*, left hand bird about 12 years old, right hand pair about 20 years old (shown by pattern on heads), Turkey, summer 1973 (Udo Hirsch)

also in the plains north of the Atlas. Coming from the southwest, the Waldrapps appear at their colonies on the coast and at the slopes of the southern Atlas in about mid February. Those moving to the north and the northeast do not reach the colonies north of the Atlas before March.

The first Waldrapps to spend the night at the breeding-place are

160. Mild territorial threat by Bald Ibises *Geronticus eremita*, note raised mantle feathers, Turkey, summer 1973 (Udo Hirsch)



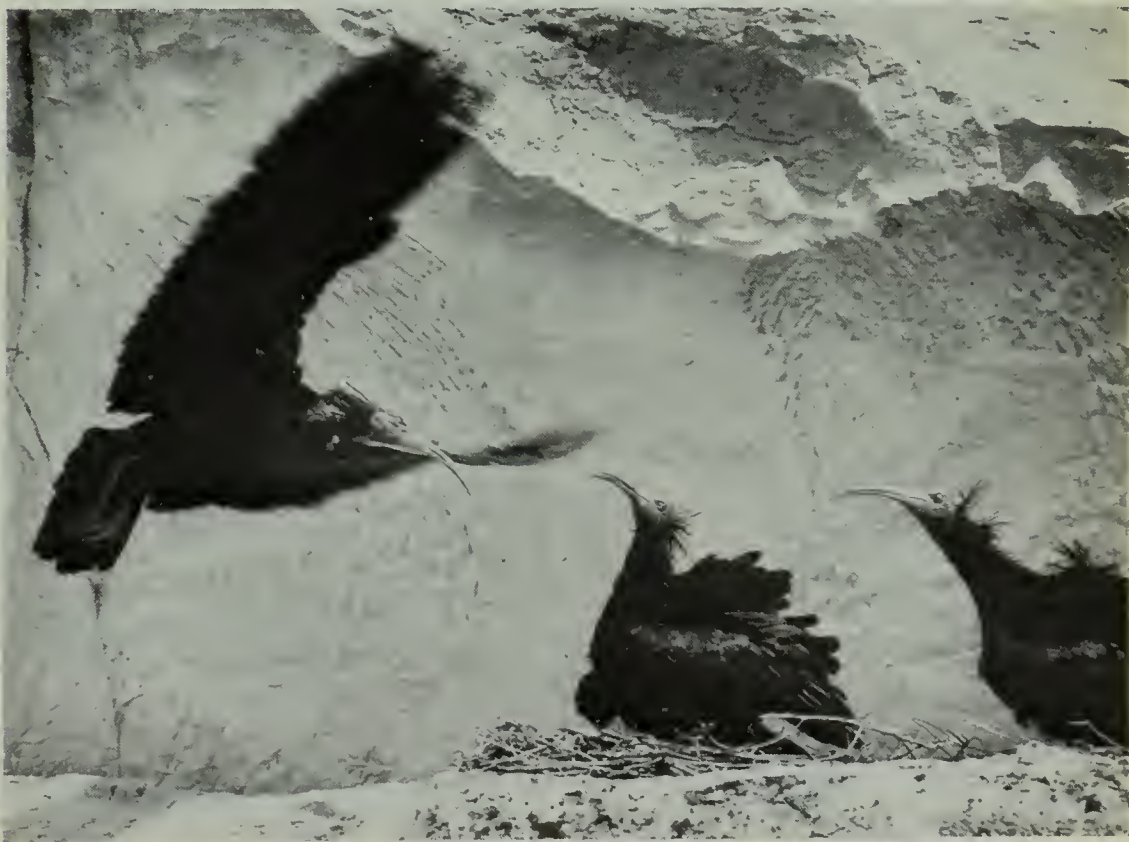


161. Bald Ibises *Geronticus eremita*, Turkey, summer 1973 (Udo Hirsch)

probably males. In the following days, they occupy distinct places on the breeding-ledge, defending them against their neighbours. Certain spots on the breeding-ledge are obviously preferred and these are almost exclusively occupied by the oldest birds. The age of the ibises can be estimated by the size of the red crest strip on the head (Hirsch 1976). As observations in Morocco prove, the Waldrapps prefer breeding-places which receive sunshine for not more than $4\frac{1}{2}$ hours a day.

At first, there may be fierce fighting for territories. They threaten with head retracted, bill lifted and gaping, and feathers—especially those on the mantle—erected. They may beat with wings and beaks, peck with open bills, and pull each other back and forth. Those on the breeding-ledge become particularly excited if, in the mornings, the other part of the population—probably the females—circles over the breeding-place.

162. Bald Ibises *Geronticus eremita*, Turkey, summer 1973 (Udo Hirsch)

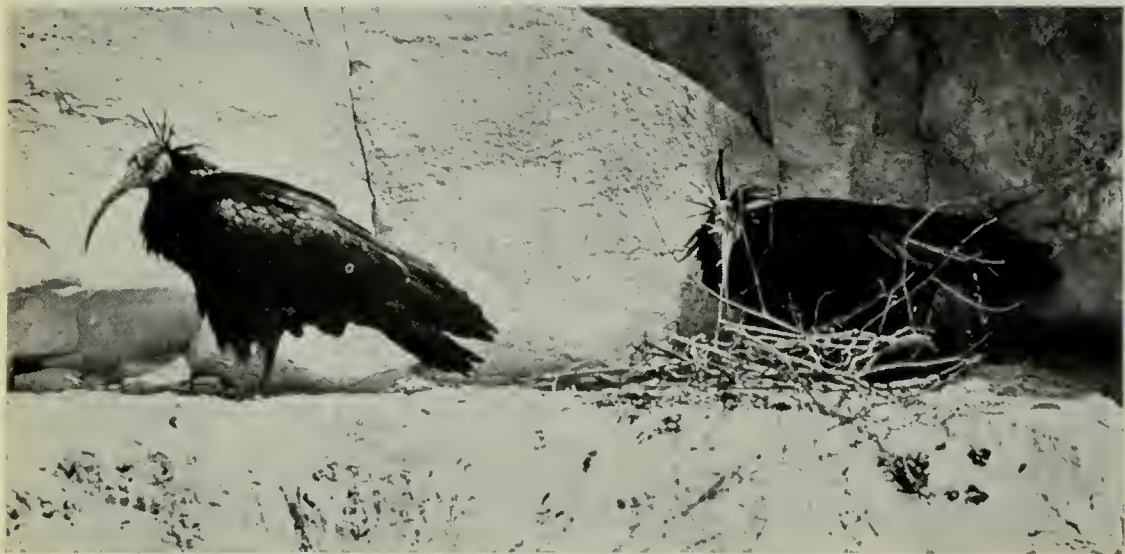


Unmated males point their bills up, then utter a guttural 'hoop, hoop' call, lowering head with bill touching breast on first syllable and raising it sharply for the second. The intensity increases when another ibis comes near; the male crouches, and, with waving crest, makes a rumbling sound, sways and passes his bill under his flanks, as if inserting nest-



163. Several Bald Ibises *Geronticus eremita*, one pair mating, Turkey, summer 1973 (Udo Hirsch)

164. Bald Ibises *Geronticus eremita* nest-building, Turkey, summer 1973 (Udo Hirsch)



material beneath his body. The second bird, if a female, watches inactively; but, when the male approaches, lowers her head; the male renews his intense 'hoop, hoop' call, then preens the back, neck and head feathers of the female; at first, the females show little activity and are rather shy, often flying off and landing somewhere else in the colony. Finally, the pair engages in mutual billing. Pair formation may take up to a week. When paired, the bird on the ledge utters a 'jum' call as its partner flies in; when it has landed, they face each other and perform mutual bowing-display. Mutual allopreening is also common at the nest-site.



165. Bald Ibises *Geronticus eremita*, Turkey, summer 1973 (Udo Hirsch)

166. Adult Bald Ibis *Geronticus eremita* brooding small chick, Turkey, summer 1973 (Udo Hirsch)





167. Bald Ibis *Geronticus eremita* adjusting nest material, composed largely of human rubbish, Turkey, summer 1973 (Udo Hirsch)

In the middle of March, the Waldrapps begin to nest. One part of the colony will fly off to look for nest material while the others—probably the females—stay at the breeding-place. Almost anything is used as nest material: plastic, cords, rags and small twigs. The ibis at the breeding-place seems to recognise its mate by sight. It calls and ruffles up its neck and back plumage long before the returning bird has landed. This becomes evident when a single bird approaches the colony: on the breeding-ledge, only its mate calls, the others showing not the slightest interest. With its head stuck out, the ibis lands with the nesting material. Its mate settles down, if it is not already sitting on the existing material, and the arriving bird then passes the nesting material over its mate's back. Together, the two ibises pile the nesting material up around the sitting bird. When bringing nest material, before copulation and before the change-over, the arriving bird gently rubs its mate's back and far side as well. I am inclined to interpret this as an adjustment to the usually cramped situation on the breeding-ledge: with the neighbours sitting on either side of the couple at a distance of only some 60-80 cm, and the ledge itself normally no wider, the room beside the occupied nest is not sufficient to allow an ibis to stand easily. Nest-building lasts about a week. At the end of March, the first egg is laid, usually in the morning between 04.00 and 09.00. The second egg is laid the next day, and on the fourth or fifth day the third, and frequently even a fourth egg. The clutch varies from three to four eggs. Among Waldrapps breeding on open ledges, I found two or, more usually, three eggs. Among those breeding in holes, however, by far the largest number of clutches consisted of four eggs (Rencurel 1974). In 1973, in Bireçik, the eggs were incubated for 28 days. At about 23.00 hours and between 03.00 and 04.00, the ibises regularly alternated



168. Bald Ibis *Geronticus eremita*, Turkey, summer 1973 (Udo Hirsch)

in incubating; they did so, too, at 11.00, at 15.00 and between 17.00 and 18.00.

At night, most non-incubating Waldrapps sleep on ledges above the breeding-places, or sideways on unoccupied parts of the ledge. Early in the mornings, some of the Waldrapps fly to the feeding-grounds and do not return until the next change-over. The ibises then change places, the newcomer almost pushing the sitting bird from the nest. From shortly before hatching to a couple of days afterwards, dabs with the beak are frequent at the change-over.

About two hours pass between the first chipping of the egg and the hatching of the chick. Several times, I watched the parents help: the adult bird would break off small pieces of the egg-shell and pull at the chick, which then started moving strongly; the remains of the shell were at once thrown out of the nest. Only 15 to 20 minutes after hatching, the chick was fed for the first time. The parent lowered its head and beak to the side and clasped the chick's beak. Propped between the two halves of the beak, the chick sat up until it reached the parent's gullet. In the first few days, the food consisted of a shiny, silver slime. From about the tenth day onwards I could see solid substances in the food. The chicks beg with trilling calls and vehement nods of their heads. Particularly after a change-over, which is often followed by a feeding of all the chicks, begging can be heard from far off. The hungriest chick, usually the oldest, stops begging and starts violently pecking the heads of the other begging chicks until they hide their beaks and heads under their breasts and bellies. Only then, this chick begins begging and is fed. Now, the next chick get up, begs, and likewise thrashes the others until it is being fed. If four chicks are in the nest, the smallest will be the last to get food and, therefore, is likely to get the least. The differences in size among the chicks become more visible from day to day. At Bireçik, only one youngest chick in broods of three fledged in 1973, while all other last-hatched ones died (but insecticides, disturbance by human beings and atmospheric influences could also have been the causes of death).



169. Bald Ibis *Geronticus eremita* feeding chick (stretching inside parent's bill), Turkey, summer 1973 (Udo Hirsch)

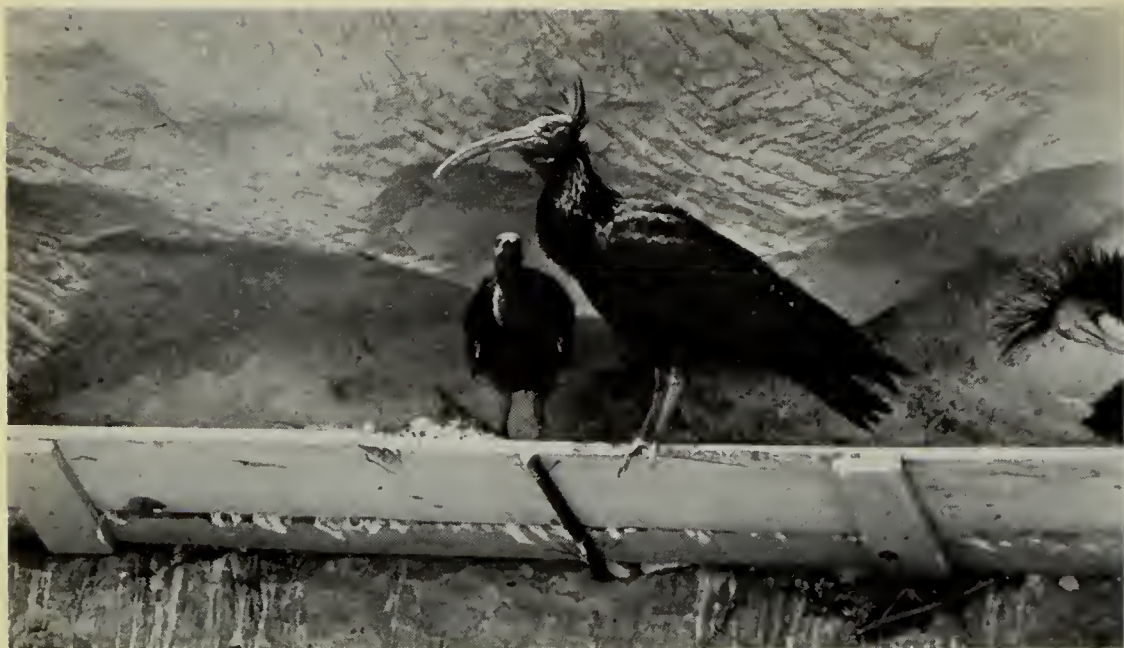
When about a fortnight old, the first black feathers show through the chicks' down. Now, they are kept waiting more frequently and for longer. Their parents fly to the feeding-grounds together. In June, the adults at Bireçik are absent all day and return to the colony only in the evenings. Having been pretty fat, the young birds now slim a bit and, while the adults are absent, practise flying. After 43 to 47 days, they



170. Feeding group of Bald Ibises *Geronticus eremita*, Turkey, summer 1973 (Udo Hirsch) fledged. A few days later—in 1973 in Birecik, on 18th June—the young leave the breeding-ledge for the first time and, together with their parents, fly to the feeding-grounds. In 1973, all the Waldrapps had left Birecik by 28th June.

Semi-arid grounds with little vegetation are preferred for feeding. Rarely will the Waldrapps seek food on pastures or tilled fields with plants growing higher than 25-30 cm. The main food of the Birecik Waldrapps consists of the larvae of beetles and other insects. With its beak, the ibis pecks under small stones and in sandy ground. The prey is usually transferred into the gullet by a quick lift of the beak. In the gizzard of a 14-day-old chick, there were not only ground-beetles (Carabidae) and mole crickets (Gryllotalpidae) but also ants (Formicidae) (Parslow 1973). The Waldrapps ingest small stones as a help for digestion. Basically, the same food biotopes are sought in Morocco. Hardly ever did I see Waldrapps drink. Most of their need for fluids appears to be satisfied by the liquid content of their food. Two colonies in Morocco are quite a way from fresh water. A favourite food of the Waldrapps of these colonies is small snails, which, during the day, hang down from shrubs. The Waldrapps pick them and swallow them whole. The amount of liquid in these snails is quite high.

The wintering areas of the Turkish population are supposed to be on the Red Sea coast and in northeast Ethiopia, where Waldrapps are observed particularly in December, January and February. A summary of Waldrapp records in Ethiopia was given by Smith (1955, 1970). Some of these observations were at times when Waldrapps normally turn up in Birecik, 2,600 km away, and others were in April and May, within the breeding-season. It is, therefore, not impossible that, as well as the Birecik colony, there are others, as yet undiscovered, in the Red Sea region.



171. Adult Bald Ibis *Geronticus eremita* with 30-day-old chick on artificial wooden ledge, Bireçik, Turkey, summer 1973 (Udo Hirsch)

In the wild, Waldrapps appear not to breed until their fifth year, although they are already fully developed at the age of three. In none of the colonies that I visited did I find breeding Waldrapps younger than six years old. The maximum age of the Waldrapp is reputed to be about 25 years, but there is no firm information. The Moroccan Waldrapps winter in the south and southwest of Morocco, although singles have been seen on the Mauritanian coast of the Atlantic. In several places in Morocco, groups of up to 120 can be found daily in winter.

In 1977, 13 pairs nested in Bireçik, and 17 young fledged. Not only the Bireçik breeding birds, but also some of those in heavily disturbed Moroccan colonies are too old. Regrettably, a collapse of the Bireçik colony must be expected. In Morocco, where in 1975 I counted 198 breeding pairs in 13 colonies, the population dropped to 119 pairs in 1977. While the decline of the Bireçik population is due mainly to insecticides and human disturbance at the breeding-places, the population in Morocco is jeopardised by a combination of tourism, alteration of biotopes, egg-stealing and killing of young.

In Bireçik, to rejuvenate and enlarge the wild population, attempts are now being made to raise young Waldrapps in large cages. Though urgently needed, protective measures have not yet been taken in Morocco.

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Udo Hirsch, Blankenheimer Str. 54, D-5488 Adenau,
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Mystery photographs



31 Although clearly a seed-eating passerine, the specific identification of last month's mystery bird poses a problem. The plain plumage and shallowly forked tail indicate, however, that it is a bunting (Emberizidae) or sparrow (Passeridae) rather than a finch (Fringillidae). The rather large,

prominent eye and (an important separation character unfortunately not shown well here) the markedly incurved cutting edge of the upper mandible, which gives the impression that the mandibles do not fit together properly, identify it as a bunting, and eliminate the superficially similar female House Sparrow *Passer domesticus*.

The stance and habitat point to a bunting in the genus *Emberiza* rather than a Lapland *Calcarius lapponicus* or Snow Bunting *Plectrophenax nivalis*, and the heavy build, unstreaked underparts and lack of white in the tail (beware the strong sunlight on the nearside of the tail) narrow it down to the female or immature of one of two closely related species: Black-headed *E. melanocephala* or Red-headed Bunting *E. bruniceps*.

Although typical adult males of these species are readily identifiable, individuals in all other plumages are similar and sometimes apparently indistinguishable, according to Lars Svensson (1975, *Identification Guide to European Passerines*), a situation no doubt somewhat aggravated by some interbreeding in one of the narrow zones of overlap, at the southeast corner of the Caspian Sea. The Black-headed, however, is generally larger and usually (especially when immature) has a rufous tinge to the upper-



172 & 173. Mystery photographs. Identify the species. Answer next month

parts compared with the grey-brown upperparts of Red-headed (although note that the rump is not necessarily rufous). Thus, a small, non-rufous Black-headed is likely to be misidentified. The call may be useful in difficult cases: the full 'tchup' of Black-headed compared with the thinner 'twip' of Red-headed, but this may be mainly a function of bill size (as in the case of the calls of adult and juvenile Crossbills *Loxia curvirostra*), and therefore not diagnostic. The songs of the two species are in fact extremely similar.

The above characters cannot be used in the present instance and it could be maintained that the photograph is not identifiable. The thick-set appearance, however, and especially the well defined white wing-bars indicate that it is Black-headed rather than Red-headed, which has a less hunched stance and usually has buff wing-bars (although, on some young birds in autumn, they may fade to white). The bird in plate 148, repeated here, was in fact a female Black-headed Bunting feeding young, photographed near Delphi, Greece, by Keith Atkin in June 1976.

TIM INSKIPP

Personalities

20 Valerie M. Thom

Valerie—she is seldom addressed otherwise—is the new President of the Scottish Ornithologists' Club and only the second ♀ to hold the post. The first was Evelyn Baxter, the Club's founder, who encouraged Valerie's first attempts to count wildfowl. The new President is better known in Scotland than in the south; she has for long been associated with matters ornithological.

Hers is the story of the development of a conservationist. Educated mainly in Edinburgh, she graduated BSc(Agri.) and spent nearly twenty years on dairy advisory work. Valerie's interest in birds was sparked off by a visit to Fair Isle in 1952; she returned twice more on holiday and then, in 1955, became the observatory's first Assistant Warden, under Ken Williamson. Highlights of that year included a Thick-billed Warbler *Acrocephalus aedon* and a Whimbrel *Numenius phaeopus* of the Nearctic race *hudsonianus*, both firsts for Britain.

Valerie joined the SOC in 1953 at a time when she was often visiting the Ythan where her continuing attention to wildfowl began and she became involved with counting; when, later, she concentrated chiefly on geese, she co-operated with Hugh Boyd and then with Ian Newton. Through working alongside professionals, she became professional herself in the way she tackled things, and has always been highly regarded for her reliability. Very soon, Valerie appreciated that a bird cannot be properly understood without some knowledge of its habitat and the part played in that habitat by the plants and animals present. Soon, she was progressing from ringing and rarity-finding to the study of distribution



174. Miss Valerie M. Thom (*W. S. Forbes*)

and populations, and so to ecology, wildlife conservation and the place in this for education.

Persuading other people to share her interest in birds and their habitats started for Valerie in 1963 with the formation of an ornithological section of the Perthshire Society of Natural Science. Involvement with others continued through tutoring bird courses at the Kindrogan Field Centre and a variety of activities with the Scottish Wildlife Trust at the Loch of Lowes and elsewhere, notably in connection with the production of interpretive guides. Subsequent to this development of an educational approach, it was an almost logical outcome that Valerie should be appointed in 1969 to the Conservation Education Branch of the Countryside Commission for Scotland as its Interpretive Planning Officer; recently, she has become the Commission's Regional Conservation Education Officer for the north of Scotland.

Valerie's special interests include travel to remote places (she has visited Iceland, parts of the USA, the Galapagos Islands, the Amazon and the Seychelles), photography (her early film of Fair Isle ranks high as a documentary), and writing.

A catalogue tells little of the personality of the person involved. From what has been said, Valerie emerges first as very dedicated; secondly, despite her involvement with education, as something of a loner (but a loner liking to organise); thirdly, as being more professional than amateur in outlook. All this is borne out by closer acquaintance, with the proviso that Valerie is a difficult person to know intimately. She is reserved, quiet, sometimes almost aloof, although this apparent austerity may in fact be a response to shyness or a dislike of the limelight. Valerie has not much small talk; quite certainly she does not suffer fools gladly, especially

those of both sexes who admit they know little of the subject in question, profess to wish to learn more, but do absolutely nothing about it. Valerie knows her own mind and likes to adopt (or persuade others to adopt) her solution, which is usually very direct.

One would like Valerie to let her hair down sometimes. Does she ever? The time to observe this, I am told, is after the annual dinner on the Saturday of an SOC conference, when Valerie may be seen dancing reels far into the night. It is reassuring to find that she is, after all, just like us.

W. J. EGGELING

Notes

Pied-billed Grebe in Grampian On 9th January 1977, a small grebe (Podicipedidae) was seen in front of one of the hides on the RSPB's Loch of Strathbeg Reserve in Aberdeenshire. Between then and 27th March 1977, it was observed frequently and at ranges down to a few metres by a number of people. It remained in the more sheltered southwest corner of the loch—the only section frequented by Little Grebes *Tachybaptus ruficollis*—which includes a small pool connected to the main loch by only a narrow neck of water, staying either close to or among the emergent vegetation. On one occasion, it was seen to catch and eat a three-spined stickleback *Gasterosteus aculeatus*. Once, when a feral mink *Mustela vison* emerged from the reeds close by, the grebe followed it, with upright and elongated neck, until it returned into the reeds.

The following description was obtained:

Shape very much that of Little Grebe, but larger and build much more robust. General impression of brownish bird, darker on back and crown, slightly russet on flanks, with white undertail-coverts. Cheeks noticeably pale. Deep, heavy bill, pale with blackish vertical band around

it more than halfway towards tip. Black throat patch, evident in January, had become more clear-cut and obvious by March. Wing-stretching revealed white tips to at least some of main flight feathers, apparently secondaries.

We identified the bird as an adult Pied-billed Grebe *Podilymbus podiceps* in breeding plumage. A photograph of it, taken by J. R. East, has already been published (*Brit. Birds* 71: plate 181). The grebe remained fairly inconspicuous throughout its stay, but, on the day that it was last seen (27th March), it moved farther out, into open water. There, it made several, short, low flights and frequently wing-flapped.

This was the fifth record of Pied-billed Grebe in Britain and Ireland (see *Brit. Birds* 58: 305-309; 60: 290-295, 295-299; 62: 460; 70: 446) and there was a sixth, in North Yorkshire, in April-May 1977 (*Brit. Birds* 71: 488).

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Flight characters of Wilson's Petrel The purpose of this note is to confirm, amplify and illustrate with photographs some of the field characters of Wilson's Petrel *Oceanites oceanicus* noted by I. J. Ferguson-Lees in *BWP* (vol. 1, pages 156-157).

In *The Handbook* (vol. 4, page 35), B. W. Tucker gave as one of the most important or diagnostic characters 'the *yellow-webbed* feet . . .', and this misleading statement has been perpetuated in field-guide after field-guide, artist after artist religiously painting in little patches of bright yellow.

I filmed Wilson's Petrels between 10th and 17th February 1968 (Boswall 1968), at two different localities near the Antarctic Peninsula, as they fed at short range in calm water and as they flew more distantly



175. Wilson's Petrel *Oceanites oceanicus* in worn plumage, Signy Island, South Orkney Islands, February/March 1968 (Roger Beck)

176. Wilson's Petrel *Oceanites oceanicus*, South Georgia, March 1978 (Bruce Pearson)

over rough seas. Not even careful frame-by-frame analysis reveals yellow webs. It is now generally agreed—e.g. by Halle (1973), Finch *et al.* (1978) and King (1978), besides Ferguson-Lees (1977)—that only in highly favourable circumstances is this ever a useful field character. In any case, individuals vary: some examined in the hand by Roberts (1940) had maize-yellow webs marked with irregular dark blotches. Tuck (1978) implied (page 46) that this character can be seen only in the hand, but later gave yellow webs as a field character (page 156). With the right bird and the right view, however, such light-coloured webs are discernible in the field, as for example Harper & Kinsky (1978) pointed out, and as plate 175 clearly shows.



177. Wilson's Petrel *Oceanites oceanicus* in moult, Atlantic 30 km off New Jersey, USA, July 1974 (Alan Brady)

My field experience confirms that the long legs of Wilson's do not always protrude beyond the tail. When they are held right back, however—as they usually are—they do protrude, as plates 176 and 177 clearly show. Alexander Wilson himself (Wilson & Bonaparte 1831)

178. Wilson's Petrel *Oceanites oceanicus* in worn plumage, Signy Island, South Orkney Islands, February/March 1968 (Roger Beck)



was the first to record this as the most diagnostic point distinguishing Wilson's from Leach's Petrel *Oceanodroma leucorhoa*: the latter's feet are concealed beneath its tail.

In the western North Atlantic, the species most likely to be confused



179. Wilson's Petrel *Oceanites oceanicus*, South Georgia, February 1971 (Inigo Everson)



180. Wilson's Petrel *Oceanites oceanicus*, Atlantic 30 km off New Jersey, USA, July 1974 (Alan Brady)

181. Wilson's Petrel
Oceanites oceanicus, South
Georgia, March 1978
(Bruce Pearson)



with Wilson's is Leach's and, recently, Finch *et al.* (1978) have drawn attention—apparently for the first time—to the fact that a flying Wilson's has no pronounced angle in the leading edge of its wing, whereas the wing of Leach's is sharply angled at the carpal joint. This point is nicely illustrated by plate 178.

In the eastern Atlantic, the Storm Petrel *Hydrobates pelagicus* is a more likely source of confusion with Wilson's than is Leach's; it shows, however, a variable, but distinct, white bar on the underwing (see plate 182, and *Brit. Birds* 57: plate 26b; 68: plate 11), unlike the rather more evenly hued underside of the wing of Wilson's (plate 179). That the underwing of Wilson's need not always look uniformly dark is, however, rather disturbingly shown in plate 180.

182. Wilson's Petrel *Oceanites oceanicus*, South Georgia,
March 1978 (Bruce Pearson)



Wilson's Petrel's square tail with rounded corners shows well in plate 181, as does the narrow, pale diagonal bar across the upper side of the wings (see also plates 175-178 and *Brit. Birds* 65: plate 75a).

The following persons helped with this note: Roger Beek; Lanee Tickell; and John Croxall, Inigo Everson, Bruce Pearson and Peter Prince of the British Antarctic Survey.

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An earlier version of this note was first received in July 1974, but then lost: we apologise to the author for the long delay in publication.

We draw readers' attention to the notes on Leach's Petrel on pages 334-336. A further character, which immediately distinguishes Wilson's from Leach's Petrel and from Madeiran Petrel *Oceanodroma castro*, and to a slightly lesser extent from Storm Petrel, is the great extension of the white of the rump patch around onto the flanks and undertail-coverts. This character, which is visible at great range, was noted and illustrated in *BWP* and shows clearly in photographs of Wilson's in side view (e.g. *Brit. Birds* 65: 75a; 72: 176, 179 & 180). Compare with plate 182, which shows the partial extent of this character on Storm Petrel, and plates 183-185 showing the very restricted side extension of the white of the rump patch on Leach's Petrel. Eds.

Leach's Petrels foot-pattering on water On 12th November 1977, at Cheddar Reservoir, Somerset, I observed a Leach's Petrel *Oceanodroma leucorhoa*. For most of half an hour in the late afternoon, it stayed apparently in the comparative shelter of the west side of the reservoir, feeding. Its wings were held slightly raised and almost motionless while, at the same time, its legs dangled, with the feet occasionally pattering on the water surface. Although this behaviour was correctly described by David Saunders (1968, *Birds of the World*, vol. 1, page 69), I. J. Ferguson-Lees (1977, in *BWP*, vol. 1, page 168) stated that the species does not patter with its feet like Wilson's Petrel *Oceanites oceanicus* and most other storm-petrels, nor walk on water.

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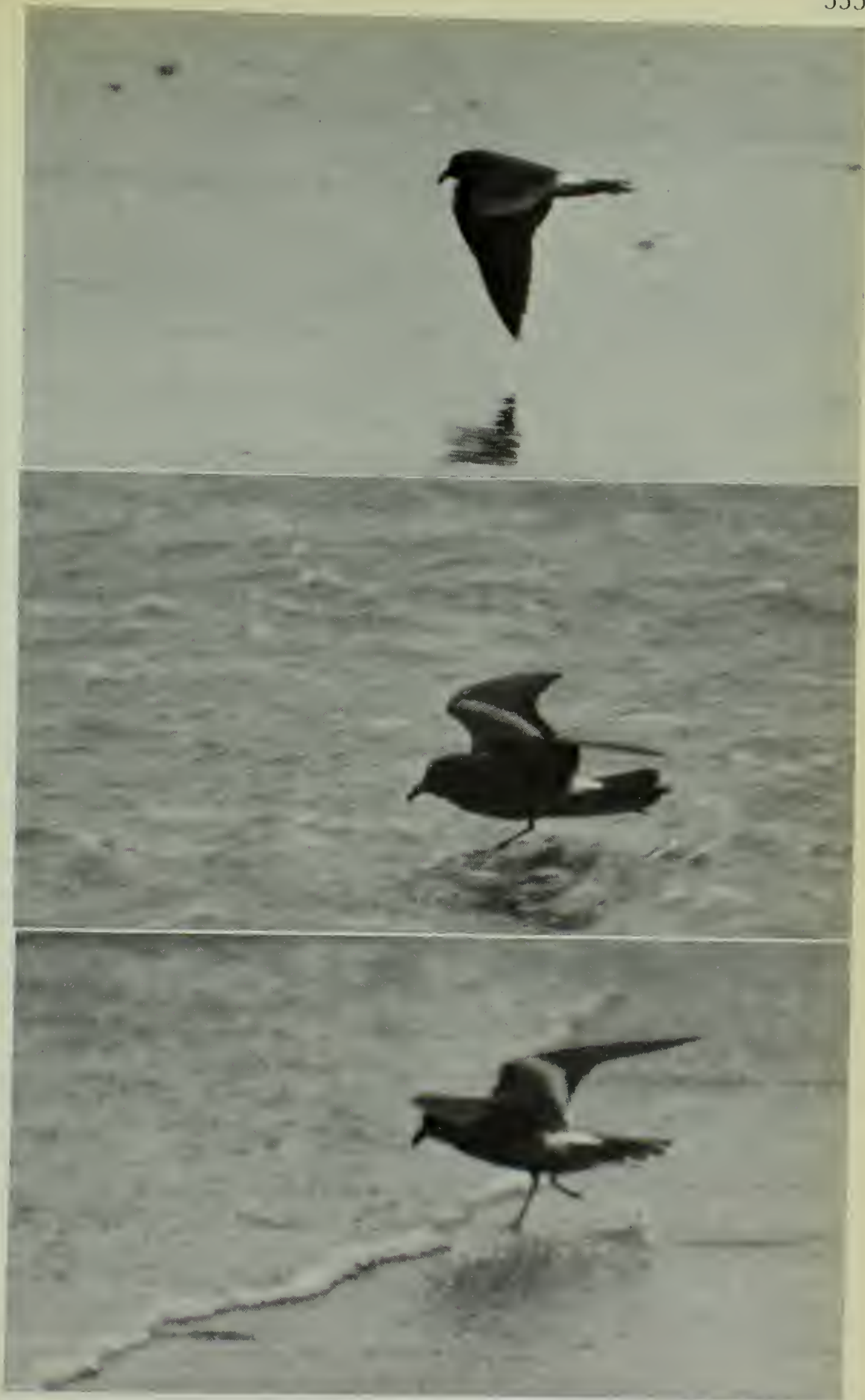
I. J. Ferguson-Lees (in *BWP*) stated under the field characters section for Leach's Petrel *Oceanodroma leucorhoa*: 'Does not patter with feet on surface like *O. oceanicus* [Wilson's Petrel] and most other storm-petrels, or walk on water.' One could conclude from this statement that any petrel seen foot-pattering is not a Leach's.

On 30th September 1978, however, at New Brighton, Cheshire, together with J. M. Bayldon, we watched a Leach's Petrel at ranges down to 5 m feeding over the marine swimming pool. When picking food from the surface of the water, its legs dangled, with the feet pattering or walking on the surface. This action, in direct contrast to the statement in *BWP*, was seen on several other occasions during the day when Leach's came within close range, and other observers to whom we subsequently spoke confirmed that they had also observed foot-pattering by Leach's on various dates in September 1978.

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Flight characters of Leach's Petrel On 30th September 1978, I visited the Wirral peninsula, Cheshire, hoping to see some of the Leach's Petrels *Oceanodroma leucorhoa* reported there in large numbers over the previous few days.



183-185. Leach's Petrels *Oceanodroma leucorhoa*, Cheshire, September 1978 (Keith Atkin)

Near gale-force westerly winds were still prevailing and several Leach's were seen close inshore at Leasowe. During frequent periods of heavy showers and poor visibility, some of the petrels swept low over the beach and attempted to feed in pools on the shore, on the wet sand and along the tide-edge. Despite the appalling conditions, I managed to photograph a few (plates 183-185) and the thrill of having them literally at one's feet was a never-to-be-forgotten ornithological experience.

The photographs should be compared with those of Storm Petrels *Hydrobates pelagicus* (Brit. Birds 68: plate 11) and Wilson's Petrels *Oceanites oceanicus* (in this issue: plates 175-181). Leach's has longer, more pointed wings, with a prominent pale diagonal bar on the upper surface, and lacks the white underwing-bar of Storm. The forked tail is visible at a fair distance. Although the white rump contrasts well, it is probably less noticeable at long range than that of Storm; the dark central dividing line can be seen only at very close range.

The usual flight of the Leach's appeared very buoyant and graceful, with frequent long glides. When feeding, however, they held their wings out stiffly, slightly above the horizontal, and pattered on the surface of the water, or the wet sand, as if walking. Frequently, they hung motionless against the wind, with their feet just touching the surface, before pecking at some small morsel. This behaviour has been described previously, by David Saunders (1968, in *Birds of the World*), but, regrettably, it was later categorically denied by I. J. Ferguson-Lees (1977, in *BWP*).

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We draw attention to the notes by Jeffery Boswall on Wilson's Petrel and by Brian Rabbitts and Douglas Page & Peter Greaves on Leach's Petrel on pages 330-334. Eds.

Griffon Vulture apparently feeding on beetles On 16th May 1970, at Zahara a los Atunes, Andalucia, Spain, I saw a Griffon Vulture *Gyps fulvus* descend and alight on the sandy seashore near some marram *Ammophila*. It began to walk about, picking up and swallowing numerous small objects from the sand surface. These objects were apparently separated by several metres, as the vulture had to walk or run quickly towards each one, sometimes hopping 1 m or so. Observation strongly suggested that the prey was mobile. After a while, the vulture flew off, and close inspection revealed that many black beetles about 2 cm long were running over the sand at intervals. There appeared to be nothing else which could account for the vulture's behaviour.

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Occasional insect-eating, especially of locusts *Locusta* and termites (Isoptera), has been recorded for several genera of vultures—*Torgos*, *Trigonoceps*, *Necrosyrtes* and *Neophron*—but apparently not for *Gyps*, although this observation by Dr Beven is not unexpected. Eds

Kestrel robbing Merlin During December 1977, on Walney Island, Cumbria, together with Mr and Mrs S. Aircy, Mr and Mrs N. Jackson,

J. Berryman and others, I saw a female Merlin *Falco columbarius* pitch into a group of Greenfinches *Carduelis chloris*, the force of its attack carrying one to the ground. Our attention was then drawn to a female Kestrel *F. tinnunculus* hovering above the Merlin and its prey. The Kestrel suddenly dropped upon the back of the Merlin, which flew away. The Kestrel then ate a leisurely meal. We observed the incident from a hide less than 20 m away.

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Previous notes have recorded piracy among raptors, owls (Strigiformes) and crows (Corvidae) (*Brit. Birds* 64: 317-318, 543; 66: 227-228), including a Kestrel robbing a male Sparrowhawk *Accipiter nisus* of a small mammal (*Brit. Birds* 70: 35-36). Eds

Kestrel robbing Barn Owl At approximately 10.30 GMT on 30th January 1971, while walking along a lane close to Loch Ken, Dumfries, F. Oates and I saw a male Kestrel *Falco tinnunculus* sitting on the apex of a chicken coop in the centre of a small field. It was uttering a very excited chatter: 'kee-kee-kee', repeated two or three times. Suddenly, a Barn Owl *Tyto alba* flew out of the coop carrying a small rodent and towards an old barn. The Kestrel gave chase and attacked the owl from behind; it grabbed the rodent and appeared to be 'back-peddalling' frantically, trying to take it from the owl. The latter continued flying, dragging behind it the Kestrel, which was still hanging on to the rodent when the owl disappeared into the barn. Neither bird was seen for half an hour: then we saw the Kestrel preening in the top of a tree. In the afternoon, we revisited the area and again saw the Barn Owl quartering the same field, at times only 4 m from us. It dropped into the grass twice, but did not appear to catch anything; on a third occasion it caught a large rodent and mantled it in the grass. Within seconds, the Kestrel arrived, apparently from nowhere, and landed on the owl's back. The two rolled over in the grass, fighting for the prey; the falcon managed to take this and flew off over the valley. The Barn Owl lay in the grass for about a minute, with its beak open and wings spread, and then resumed hunting. When it next caught a small rodent, it swallowed it almost immediately.

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Harrier-like flight of Saker Alan Parker's note on a Peregrine *Falco peregrinus* quartering the ground like a harrier *Circus* (*Brit. Birds* 71:37) reminded me of the following. On 8th October 1967, at Tuz Gölü, central Turkey, I noticed a Saker *F. cherrug* quite low over the lake shore. It had very slow deliberate wing beats, quite unlike any falcon I had seen before and much more like a Pallid Harrier *C. macrourus*. Its flight was in the form of continuous flapping, but, when it came about 12 m overhead, it began to glide on slightly uptilted wings. The wings were held more or less straight out to the bend, where they became quite noticeably upturned, in the manner that Kestrels *F. tinnunculus* sometimes adopt. I do not know whether the Saker was hunting, but the ground in the area was peppered with the holes of jerboas *Jaculus*.

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Irregularity of injury-feigning by Common Sandpipers At about 06.30 GMT on 12th May 1966, at Salen, Loch Sunart, Highland, I heard loud, excited calls from a Common Sandpiper *Actitis hypoleucos*, which flew off a bank of heather *Calluna* with its tail fanned. I started to look for a nest, and in probably less than 30 seconds a second bird tumbled out of a bare scrape in the bank and performed a full injury-feigning run, with tail widely fanned, for about 15 m away through the heather and dead bracken *Pteridium*; it then became silent before flying off, calling at normal intensity. I did not see the first sandpiper again, and none was at the site on my last visit on 14th May.

At about 11.15 GMT on 31st May 1975, at Loch Rannoch, Tayside, a Common Sandpiper silently left its nest. As I passed this site again at 12.50 hours, a sandpiper fluttered off the edge of the nest with tail spread and wings quivering; it began to call, heightening this twice to a shriek as it squattered along the shore of the loch. I do not know whether this was the bird that I flushed originally or its mate, nor the state of incubation of the eggs, as I was unable to revisit the spot.

Again, at about 11.15 GMT on 28th May 1978, at Mossyard Bay, near Gatehouse of Fleet, Dumfries & Galloway, I flushed a Common Sandpiper, at a range of less than 1 m, from its nest on a small rocky ledge with fescue *Festuca* and stonecrop *Sedum*. The bird fluttered down to the shore in full distraction display, alarm calls interspersed with squeals, its tail spread and wings quivering. Gradually, it quietened down and stood about 50 m away, uttering repeated alarm calls. Since there were many visitors about, I was not able to revisit the site.

Coward (1920) described apparently identical behaviour by a Common Sandpiper which, when disturbed from its nest, 'shrieked like an alarmed Starling [*Sturnus vulgaris*] as she squattered along the ground with trailing wings and expanded tail, while the following day she slipped quietly from the nest without any hesitation.' He did not mention the share of the sexes, and seemed to assume that the female alone incubated. Bannerman (1961) quoted Coward and remarked that 'injury-feigning is not uncommon, in fact it has often been witnessed', while B. W. Tucker in *The Handbook* described injury-feigning as frequent. Yet Walpole-Bond (1938) did not mention it in his account of the species' breeding; Armstrong, in two reviews of distraction displays (1954, 1956), did not list the Common Sandpiper as an injury-feigning species; nor did Jourdain earlier (1936). Bent (1929) was silent on the subject as regards the closely related Spotted Sandpiper *A. macularia*; but Mousley (1937), who over two seasons found the same male did most of the incubating, described the bird as 'sometimes displaying and squealing'.

On the same day as my observation by Loch Rannoch, I found four more Common Sandpiper nests, off all of which the birds flew silently, as they did from two more Solway nests found on 31st May 1978: this has been my general experience of the species. Clearly, injury-feigning occurs, even early in the breeding season; but a fairly extensive search through the English language literature has failed to reveal any more

recent records and poses the question: how often must a behaviour pattern appear, to be categorised as 'not uncommon' or 'frequent'?

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Identification of Bonaparte's Gull A Bonaparte's Gull *Larus philadelphia* which frequented Saltholme Pools, Cleveland, from 12th August to 2nd October 1977 (*Brit. Birds* 70: 507) was probably seen by more observers than any other in Britain. When first located, it was in an advanced state of moult from first-summer to second-winter, retaining first-year outer primaries and some brown-marked first-year secondaries, tertials, wing-coverts and tail feathers. These traces of immaturity had gone by October, when the moult to second-winter was complete, and thus the bird was identical to a winter adult.

The Bonaparte's Gull was often difficult to find among hundreds (occasionally thousands) of Black-headed Gulls *L. ridibundus*. The features which proved most useful for locating it are mentioned almost incidentally in the literature, and are therefore documented here. During the early part of its stay, the wing pattern was at a transitional stage, and this is also described. Other well-known identification features, which were present but not particularly helpful for locating the bird, are not mentioned.

Although the Bonaparte's Gull was only three-quarters the size of the Black-headed Gulls, this characteristic could often not be used because the bird was partly hidden by other gulls. Of more consistent use was the grey mantle, which was distinctly darker than those of the Black-headed Gulls, the difference being most pronounced in dull light. As both species usually rested during the evening when the light was fading, this characteristic was very convenient.

Another useful feature was the grey nape, which, although a shade paler than the mantle, merged imperceptibly into it. The napes of the Black-headed Gulls were contrastingly white. The grey nape of Bonaparte's was mentioned by Grant (1978), but its value was perhaps not sufficiently stressed. Throughout its stay, it was possible to point out the Bonaparte's Gull to visitors with complete confidence even when all that could be seen of it was the grey nape. Both plumage features (darker mantle



Fig. 1. Wing pattern of Bonaparte's Gull *Larus philadelphia* moulting from first-summer to second-winter plumage, Cleveland, August 1977 (P. J. Grant, from drawing by David Britton)

and grey nape) were also noted in March 1970 on the winter adult at St Ives, Cornwall (*Brit. Birds* 64: 354).

I first saw the Cleveland bird swimming with Black-headed Gulls, when its neat, black, dagger-like bill and small size immediately suggested Bonaparte's Gull. In a brief flight, it revealed a white blaze on the fore-wing, confirming the identification, but also a black trailing edge to the inner primaries, which curled across the outer primaries, almost to the forward edge of the wing, the wing tip beyond this black line being grey. This wing pattern (fig. 1) recalled that of adult Franklin's Gull *L. pipixcan* in negative (in that species, a white trailing edge to the wing curls across the outer primaries almost to the forward edge of the wing, the wing tip being black) and was puzzling until it was noticed that several Black-headed Gulls had similar wing patterns. The pattern appeared to be caused by still-growing (and thus shorter) fresh inner primaries overlapping a few unmoulted outer primaries; this was confirmed four days later, when the outer primaries were shed. The wing pattern then became typical, with a dark trailing edge to all the primaries, but the wings were uncharacteristically rounded (as shown in *Brit. Birds* 71: plate 189, in which the outer primaries are still growing), gradually becoming longer and more pointed as the fresh outer primaries grew. Grant (1978) warned of the difficulties caused by moult during late summer and early autumn when many gulls can acquire 'wing patterns which may be unfamiliar'.

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REFERENCE

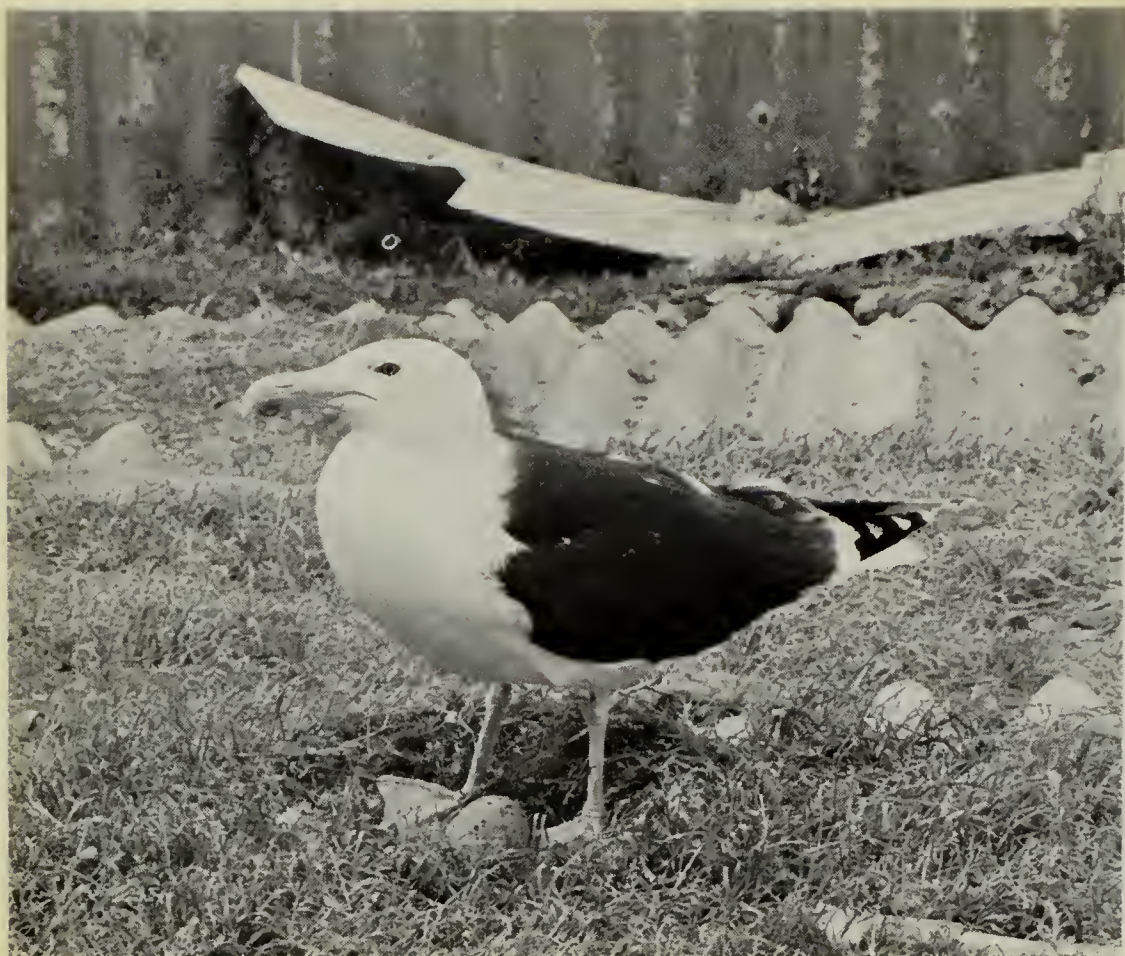
GRANT, P. J. 1978. Field identification of west Palearctic gulls. Part I. *Brit. Birds* 71: 145-176.

Roof-nesting by Great Black-backed Gulls Each summer from 1975 to 1977, a few pairs of Great Black-backed Gulls *Larus marinus* bred successfully on inhabited buildings in the district of Penwith, Cornwall (see *Bird Study* 24: 89-105). Since this is an unusual roof-nesting species outside Cornwall, their behaviour and details of breeding may be of interest. During much of the winter, Great Black-backs and many Herring Gulls *L. argentatus* visited their potential roof-top breeding territories on and off, spending long periods loafing around them. They roosted on St Clement's Island, opposite the village of Mousehole. As winter merged into spring, their territorial bond increased noticeably, and they stayed by or near their breeding sites of the previous summer. In late April and early May, some gulls bred in or near their old nesting haunts, not returning to the island to roost. Curiously, some of the nesting Great



186 & 187. Great Black-backed Gull *Larus marinus* incubating in colony of Herring Gulls *L. argentatus* on partly grassed-over, galvanised roof of quarry shed, Cornwall, June 1976
(J. B. & S. Bottomley)





188. Great Black-backed Gull *Larus marinus* at nest scrape containing one egg on quarry-shed roof, Cornwall, June 1976 (J. B. & S. Bottomley)

Black-backs would tolerate no intruders at all, whereas others allowed Herring Gulls and Jackdaws *Corvus monedula* to nest fairly near them.

One of the two pairs of Great Black-backed Gulls built close to and overlooking a busy thoroughfare, and could be seen fairly easily from a main road. Its well constructed flat nest of bents, grasses, straw and other material was situated in an acute angle where a steep roof joined a chimney stack base. It was sheltered from prevailing winds and jealously protected from all intruders: while one adult incubated, the other perched on the ridge of the roof, very alert. When the latter took its turn on the nest, it always just slid down some 10 m of roof, with wings partly extended to keep its balance, and so approached the nest without disturbing eggs or young; its mate would launch itself into flight from the side of the roof. In rainy weather, the gulls sometimes toppled on their sides and had difficulty in regaining an upright stance. One young was reared to full-wing and allowed to stay well into early autumn; later, it 'mewed' a great deal on the nearby rooftops.

The second nest (plates 186-188) was different in almost every respect. In 1976 and 1977, it was sited in the centre of 16-22 Herring Gull nests on the partly grassed-over, galvanised roof of a quarry shed, which was occupied on working days. Noise level from men loading stone chippings and from a nearby rail-trolley system was consequently extremely high,

and on some days the wind blew quarry dust in visible clouds, covering the nesting gulls, buildings and much vegetation in the vicinity. A. G. Parsons made a number of autopsies of some young found dead, but no dust was found in their lungs. I was reliably informed that, when a single egg of this pair of Great Black-backs was accidentally broken, one of the adults ate the contents. For about two weeks after, I observed the Great Black-backs molesting breeding Herring Gulls, sometimes stealing their eggs or killing and eating early chicks; the smaller species, however, renested in the same scrape. Although their having a nest somehow lessened the Great Black-backed Gulls' aggression, they still caused much damage among the breeding Herring Gulls.

All the breeding gulls had a plentiful food supply, much of it at times obtained from fishing boat spills in Newlyn Harbour. On occasions, excess food was allowed to putrefy.

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Gulls and terns perching on wire W. G. Harvey's note on White-winged Black Terns *Chlidonias leucopterus* perching on telegraph wires (*Brit. Birds* 70: 545-546) prompts me to record the following. On 4th January 1978, while driving along the A49 near Mere Brow, Lancashire, I noticed a Black-headed Gull *Larus ridibundus* perched on roadside telegraph wires. I was unable to check how long it remained there, but it seemed to balance quite easily and was still on the wire when my car had passed. One or two other Black-headed Gulls were on adjacent post tops. I recorded the same behaviour again, at the same place, on 28th February 1979.

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In view of W. G. Harvey's note (*Brit. Birds* 70: 545-546), P. Espin and I were interested to find similar behaviour among Whiskered Terns *Chlidonias hybridus* in the Dombes region of France on 16th August 1978. Several juveniles frequently perched for long periods on wires between two small *étangs* while waiting for their parents to bring food. As my photograph (plate 189) shows, they were unable to grip the wire, but hooked their toes over it, using their tails to balance. Occasionally, individual terns chose an easier look-out position on top of one of the telegraph posts.

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189. Juvenile Whiskered Tern *Chlidonias hybridus* on wire, France, August 1978 (Keith Atkin)



W. G. Harvey (*Brit. Birds* 70: 545-546) could find no reference to web-footed birds perching on wires for protracted periods. In January 1977, on Midway in the Hawaiian Islands, I noticed Lesser Noddies *Anous tenuirostris* behaving in this way on a number of occasions. On 6th, I counted 25 on one quite short length of telegraph wire. This was during the species' breeding season, and the behaviour did not seem to be particularly related to feeding activity but rather to involve resting, off-duty birds.

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W. G. Harvey's note (*Brit. Birds* 70: 545-546) prompts me to record the following. On 21st August 1977, on the Ebro Delta, Spain, I saw a dozen Whiskered Terns *Chlidonias hybridus* perched along a telegraph wire above rice fields; they, too, were keeping their position by movements of their bodies and tails. In this case, however, telegraph wires were the only perches in the extensive rice fields of the area. P. Isenmann (*in litt.*), who studied Whiskered and Black Terns *C. niger* in the Camargue, France, from 1971 to 1977, never saw any sitting on wires.

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I was interested in W. G. Harvey's note (*Brit. Birds* 70: 545-546). On 8th October 1978 I watched up to nine Whiskered Terns perching on telegraph wires about 5 m above the ground at Pak Hok Chau, Hong Kong. They remained perched for at least five minutes. At the time, there was a group of about 27 Whiskered Terns in the area, most of which were hawking insects over the surrounding fish ponds, while a few were perched on the ends of bamboo poles stuck upright in the ponds. There appear to be no previous records of this behaviour in Hong Kong.

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W. G. Harvey's note (*Brit. Birds* 70: 545-546) reminded me of a similar observation made by A. Quinn and myself in southern Sweden on 20th September 1968. About 2 km from Lake Böringesjön, we noticed a bird about 200 m away sitting on overhead wires some 10 m above ground level. At first glance, due to its pale appearance and long tail held nearly vertically downward, it seemed likely to be a Great Grey Shrike *Lanius excubitor*, but we were surprised to discover that it was in fact a Common *Sterna hirundo* or Arctic Tern *S. paradisaea*, which looked very out of place perched alone above quite ordinary, dry agricultural country.

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Underwing of Little Auk Identification of small, solitary auks over the sea can sometimes cause problems. Gibson-Hill (1947) mentioned that juvenile Puffins *Fratercula arctica*, which are smaller and have much smaller



Fig. 1. Winter-plumaged Puffin *Fratercula arctica* and Little Auk *Alle alle* in flight (D. Braithwaite)

bills than adults, might be mistaken for Little Auks *Alle alle*. In strong winds, Puffins can indeed look small and 'quick', especially if flying with the wind; inexperienced observers have sometimes identified them as Little Auks. The reverse, however, should not occur, since, when actually seen, Little Auks appear extremely small and are recognisable on this feature alone.

One point worthy of note that does not find its way into the text of the popular field guides, and was in fact erroneously depicted by both Fitter & Richardson (1952) and Bruun & Singer (1970), is the colour of the underwing. Inspection of over 50 Little Auk skins at the British Museum, Tring, showed that, regardless of origin, age or seasonal plumage, all had dark brown underwings. Some did appear more mottled than others, but this was apparently an individual variation and the general effect was still dark, in contrast with the underwing of the Puffin, which is pale. Jonsson (1978) noted that: 'The undersides of the wings, if one has time to see them, are black, unlike those of other auks', and illustrated this difference well, but depicted an 'underwing bar', presumably caused by white endings to the median underwing-coverts, which was shown by none of the specimens examined at Tring. The underwing colour was illustrated, but not mentioned in the text, by Heinzel *et al.* (1972); it was neither illustrated nor described by Peterson *et al.* (1954).

In my experience, the underwing of Little Auk looks extremely dark, contrasting with the white belly, in the field and recalls that of Green Sandpiper *Tringa ochropus*. The dark underwings of Little Auks should prevent the misidentification of Puffins, which show pale underwings, and also have grey cheeks, a complete breast band and lack white endings to the secondaries (see fig. 1).

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Aggression by Collared Doves to Turtle Doves During May to August 1977, both Collared Doves *Streptopelia decaocto* and Turtle Doves *S. turtur* were attracted to aviaries containing the former species and feral Rock Doves *Columba livia* at Worplesdon, Surrey. On several occasions, I observed Collared Doves chasing away Turtle Doves, pecking at them and hitting them with their wings if they alighted near the aviary or were feeding on food spilled around. Often they chased the Turtle Doves to a distance of 100 m or more. At least four Turtle and two Collared Doves were involved in these incidents. On a nearby common, a Turtle Dove attempting to build a nest was continually harrassed by a Collared Dove until it eventually abandoned the site.

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Identification of Grey-cheeked and Swainson's Thrushes Given a reasonable view, the identification of North American thrushes is relatively simple. Grey-cheeked *Catharus minimus* and Swainson's *C. ustulatus* are both small thrushes lacking the strong rufous plumage tones of Veery *C. fuscescens*, Hermit Thrush *C. guttatus* and Wood Thrush *Hylocichla mustelina*, and are relatively retiring. In North America, they favour edges of woods and tangled hedgerows during their autumn migration. They usually forage on the ground in deep shade: it requires some patience to get a good field view and colours are often not so pronounced as they are depicted in field guides. Nevertheless, Swainson's is basically olive, whereas Grey-cheeked is generally greyer. The eye-ring of Swainson's is usually very distinct, but that of Grey-cheeked—if visible at all—is ill-defined. The breast-spotting of Grey-cheeked is more diffuse than Swainson's, being over a whitish base colour (not orangey-buff). First-years of both species can be aged by the neat, triangular, buff tips to the greater coverts, which form a thin wing-bar on the closed wing. All five species have a bar on the underwing (see plate 192): often very obvious in flight.

190. Grey-cheeked Thrush *Catharus minimus*, Canada, September 1971 (B. D. Harding)





191 & 192. Swainson's Thrushes *Catharus ustulatus*, Canada, September 1971 (B. D. Harding)



The main features of Grey-cheeked and Swainson's are as follows:

GREY-CHEEKED THRUSH (plate 190) Upperparts uniform olive, with little contrast between back and tail. Upperparts, head and breast generally greyer and colder than Swainson's and lacking that species' orangey-buff suffusion, which recalls Song Thrush *Turdus philomelos*. Eye-ring, if present at all, is indistinct and whitish-grey, not warm creamy-buff, prominent and clear-cut like Swainson's. Lores greyish. Mid throat and mid belly white; side throat and breast with tinge of creamy-buff, richer in autumn. Feathers at sides of throat spotted with wedge-shaped marks; those of breast with half-rounded, black marks. Flanks brownish-grey. Underwing grey, with broad whitish bar. Comparative absence of buff on breast and sides of throat distinguish Grey-cheeked

from Swainson's.

SWAINSON'S THRUSH (plates 191-192) Coloration and plumage pattern very much like miniature Song Thrush and could be overlooked as that species on quick or distant view when small size not obvious. Creamy-buff eye-ring and line from eye to bill usually prominent and clear-cut (but compare plates 191 and 192). Throat and breast strongly tinged creamy-buff. Feathers at sides of throat have wedge-shaped, black spots at tips; those of breast have rounded, black spots at tips. Breast-spotting less defined and less extensive than that of Song Thrush and underparts generally whiter. Underwing buffish, with broad, whitish-buff bar.

Veery, Hermit and Wood Thrushes are usually readily distinguishable from Grey-cheeked and Swainson's. Veery has head, upperparts and tail wholly warm orangey-buff, without prominent facial pattern or eye-ring; and breast marked with ill-defined smudgy mottling. Hermit Thrush has similar coloration to Swainson's, but the base colour of the underparts is whiter, and spotting is more prominent, especially at the front of the breast. The eye-ring and a line from eye to bill are whitish, often appearing prominent, as on Swainson's. The tail and uppertail-coverts are chestnut, contrasting with the more olive-brown remainder of the upperparts. The tail colour, however, may not be obvious in subdued lighting, and, if the tail is not seen well, Hermit is more likely to be mistaken for a Grey-cheeked than for a Swainson's. It has a distinct habit of lifting its tail with every movement; this and the chestnut tail recall Nightingale *Luscinia megarhynchos*. Wood Thrush is brown-backed, with a distinct rufous head, and has numerous prominent, round, blackish spots on its whitish underparts, equally numerous on the breast as on the flanks.

To end on a note of caution, Dr I. C. T. Nisbet (*in litt.*) has commented that, although Grey-cheeked and Swainson's 'are usually easy to distinguish at a glance, dull-colored individual Swainson's can look quite similar to warm-colored Grey-cheeks.'

I wish to thank Richard A. Forster, Peter J. Grant and Dr Ian C. T. Nisbet for their helpful comments on drafts of this text.

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Paddyfield Warbler in Cleveland On the morning of 18th September 1969, R. T. McAndrew, G. Icton and J. P. Burlison obtained brief views of an unusual *Acrocephalus* warbler in bushes bordering the bowling green on the headland at Hartlepool, Co. Durham (now Cleveland). After consulting Hollom (1960), RTM suspected that it was a Paddyfield

Warbler *A. agricola*. It was relocated in the evening by RTM, K. Redshaw, J. K. Williams and others and was soon caught in a mist-net. The following description, taken by RTM and KR, showed that, according to Williamson (1968), the wing formula was not quite right for Paddyfield.

PLUMAGE Forehead and crown greyish-brown, darker above supercilia, forming quite well-marked dark bands at sides. When compared with more rufous nape and mantle, crown had slightly olive tinge. Lores darkish. Ear-coverts warmer, paler brown than crown on upper half; lower half buff. Supercilia off-white, prominent above and behind eyes, 2-3 mm wide at widest and extending 6-7 mm behind eyes. Much less distinct in front of eye. Nape, mantle, back and scapulars paler and more rufous brown than crown. Rump most rufous part of plumage. Tail darker and greyer than rump and back, but nevertheless quite warm brown; faint fault-barring. All upperparts, from forehead to tail, completely unmarked (except for fault-bars on tail). Wings: all feathers dark, with broad fringes to coverts and tertials and narrower fringes to outer webs of remiges, of same colour as scapulars and mantle. Dark inner web of alula prominent. Chin and throat white. Breast yellowish-buff, sandy. Belly white. Flanks as breast, but paler. Underwing-coverts and axillaries off-white. Undertail-coverts pale greyish-buff.

BARE PARTS Bill: upper mandible dark purplish-brown, except for pale cutting edge; lower mandible pale, slightly greyish, flesh with a little dark at sides just short of tip. Mouth pale pinkish-yellow, tongue brighter yellow. Iris dark olive-

brown. Legs yellowish-flesh. Soles yellow.

MEASUREMENTS Wing minimum 57 mm, 'Handbook method' 58 mm, maximum 58 mm; same both wings: right (RTM) left (KR). Tail 50 mm; 12 feathers; rounded: distance between shortest (outer) and longest (central) feathers 6.5 mm (right) and 7.5 mm (left). Bill 15.5-16.0 mm (from skull), three strong rictal bristles each side, 3-4 mm long. Tarsus 22 mm. Weight 9.5 g at 20.30 and 8.8 g at 07.15 GMT.

WING FORMULA Left wing measured by KR; right wing (in brackets) measured by RTM; all measurements in millimetres. 1st primary 2.0 (2.0) longer than primary coverts. 3rd and 4th longest; 2nd -4.0 (-4.0); 5th -1.8 (-1.7); 6th -4.7 (-4.7); 7th -6.5 (-6.8); 8th -8.8 (-8.8); 9th -10.0 (-10.0); 10th -11.0 (-11.2); secondaries all between -12.0 and -14.0; tertials: longest -13.0; 3rd and 4th primaries emarginated, also slightly on 5th; emarginations extending 15 mm, 10 mm and about 5 mm respectively from tip of each primary; notch on inner web of 2nd primary 11 mm from tip, falling 1 mm short of shortest secondary; on 3rd primary, 9 mm from tip, falling between 8th and 9th primaries, nearer to 8th; on 4th primary, very shallow notch, about 4 mm from tip.

The warbler was clearly a first-year, with quite fresh body plumage, unworn wings and rather worn tail. It was kept overnight and, in the daylight of the next morning, was examined in the hand by I. F. Stewart and RTM, filmed by P. Evans, and photographed by C. S. Allen, T. Francis, IFS (plate 195) and JKW, before being ringed and released at 07.20 GMT in the place where it had been caught. It stayed in the same vicinity until 22nd September (not 21st as stated in *Brit. Birds* 65: 349) and was seen by many observers, including E. C. Gatenby, J. K. Smith, P. J. Stead, C. S. Waller and myself.

In the field, it was an obvious *Acrocephalus*—no observer questioned this—with typically long, low forehead, rather dagger-like bill, short wings and long tail. It was, however, much less streamlined than a Reed Warbler *A. scirpaceus*: the shortness of the wings recalled a Wren *Troglodytes troglodytes*, further emphasised by the length of the tail, which was frequently flicked or cocked out of line with the body; the bill was shorter than a Reed Warbler's, recalling more that of a Sedge Warbler *A. schoenobaenus*.

The generally rufous tone of the upperparts again recalled Reed Warbler, but was paler, strikingly so in sunlight, though more grey-brown in poorer light. Wings and tail were darker, with rufous edges to the feathers and a dark patch on the alula; forehead, nape and particularly the rump were the most rufous parts of the plumage. The underparts were white, with a yellowish-buff suffusion on the breast—especially at the sides, adjacent to the bend of the closed wing—and to a lesser extent on the flanks. This whiteness was noticeable in all lights, particularly on chin and throat, and contributed to the generally pale impression. Even more conspicuous was the creamy-white supercilium, which started abruptly in front of the eye, widening as it extended back towards the nape. Most observers agreed that this supercilium appeared as striking as that of a Sedge Warbler (though personally I thought it marginally less so), emphasised by a narrow brown loreal streak below it and a dark lower edge to the crown above it. The upper mandible looked dark; the lower one pale flesh. The legs were pale, looking yellowish-flesh, pale brownish or brownish-buff according to the light and individual interpretation (leg colour often seems to be the hardest facet of a bird to determine and describe).

The warbler became increasingly shy during its stay. It usually fed in bushes, but paid occasional brief visits to the ground. Silent at first, it was later heard to give frequent ticking calls (A. J. Wheeldon).

Opinion as to this bird's identity wavered at the time (and in some minds for a long time afterwards) because, though it was clearly Paddyfield on most characters, there was one feature above all that did not seem to fit: the position of the notch on the inner web of the third primary. At 9 mm from the tip, and thus falling between the 8th and 9th primaries (nearer the 8th), this notch was 3 mm higher than the position indicated by Williamson (1968) for *agricola*: opposite the tips of the secondaries. This was the fly in the ointment, since this feature fitted young Blyth's Reed Warbler *A. dumetorum*, but not, seemingly, Paddyfield. The record was submitted to the Rarities Committee as referring to a Blyth's Reed and the doubts raised by this notch position also affected that committee, which circulated the record no less than four times between October 1969 and July 1971. A long and thorough investigation was embarked upon, the ramifications of which would fill a book if given in full. In retrospect it is easy to see that the members of the committee (including myself) were decidedly over-cautious, but it was daunting to have Kenneth Williamson himself persisting in naming the bird as unquestionably Blyth's, basically on the notch position, and Dr K. Eriksson, author of a paper (Eriksson 1969) on Blyth's Reed in Finland, also plumping for that species. R. H. Dennis, however, favoured identification as Paddyfield, and, with the benefit of field experience of a Blyth's Reed in Ireland (*Brit. Birds* 63: 214-216), Dr J. T. R. Sharrock stood out for Paddyfield on every circulation; eventually, the committee's final vote was unanimous for Paddyfield. During the deliberations, Svensson (1970) established that, though the notch in question usually falls between the 10th primary and the secondaries, it can be as low as 3 mm below the secondaries or, exceptionally, as high as between the 8th and 10th primaries. This is a range of 6-8 mm,

and the Hartlepool bird's notch fell between these variables. There is clearly more variation than Williamson realised, and we must remember that he was establishing fine distinctions from experts' measurements of museum skins, notoriously different from field examination of living organisms. We must also accept that notch positions *do* vary somewhat; for example, E. R. Meek has told me that he has even examined a Reed Warbler with no notch at all.

With the notch cloud lifted, the pendulum swung right back to Paddyfield, and the Oxford University expedition to Afghanistan in autumn 1970 gave helpful confirmatory evidence which clinched the identification. Using ringing data based on catching over 200 Paddyfields and over 1,000 Blyth's Reeds, together with photographs of first-year birds in the hand, C. S. Waller (who also saw the Hartlepool bird) and Dr S. L. Pimm (*in litt.*) produced the convincing fact that all of the Paddyfields, but none of the Blyth's Reeds, had yellow soles to their feet. (At best, a few of the latter showed some yellowish, but always with a darker, more olive tinge.) They also cited as diagnostic of Paddyfield (1) the bill length, there being virtually no overlap in the two species, (2) the non-uniformity of the upperparts, with rufous nape and rump, (3) the greyish-brown forehead and crown, bordered by darker brown, (4) the prominent supercilia, (5) the white underparts, contrasting with upperparts, and breast sandy-buff, breaking the uniformity of the underparts, (6) the contrast between the dark inner and the pale outer webs of the alula, (7) the very yellow mouth, and (8) the wing and tail measurements. It is true that young Blyth's Reeds have rustier plumage than that of adults, but never as much as the Hartlepool individual, even allowing for the exaggerated warm tones on the films and transparencies influenced by the early morning sunlight and the use of Kodak film. It is also true that Blyth's Reed can look short-winged in the field (indeed, the Hartlepool bird's wings come just within the *theoretical* range given by Williamson), but Paddyfield is consistently shorter both in ringing measurement and in field impression: one observer compared the Hartlepool bird to a Great Auk *Pinguinus impennis* in this respect!

In this case, field appearance was at least as important as measurements in establishing the identification. This was the third record for Britain and Ireland, the previous two both being from Fair Isle, Shetland: on 26th September to 1st October 1925, and on 16th September 1953.

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193-196. Top, Paddyfield Warbler *Acrocephalus agricola*, Afghanistan, August 1970 (S. L. Pimm): centre, top, Blyth's Reed Warbler *A. dumetorum*, Afghanistan, August 1970 (S. L. Pimm); centre, bottom, Paddyfield Warbler, Cleveland, September 1969 (I. F. Stewart); bottom, Paddyfield Warbler, Northumberland, October 1974 (B. Galloway)



197. Blyth's Reed Warbler *Acrocephalus dumetorum*, Afghanistan, August 1970 (S. L. Pimm)



198. Paddyfield Warbler *Acrocephalus agricola*, Afghanistan, August 1970 (S. L. Pimm)

Paddyfield Warbler in Northumberland At 10.20 GMT on 12th October 1974, an unusual *Acrocephalus* warbler was found self-caught in the catching-box of a Heligoland trap at Low Hauxley, Northumberland. It was extracted by F. D. Middleton, who was struck by its pale, olive-tinged upperparts and thought that it might be a Marsh Warbler *A. palustris*. At the ringing hut, it was examined by B. Galloway, B. Little, E. R. Meek, A. M. Taylor and others: the wing-formula, with emargination on the 4th and 5th primaries, as well as on the 3rd, ruled out Marsh and also Reed Warbler *A. scirpaceus*. Of birds on the British and Irish list, the choice lay, therefore, between Blyth's Reed Warbler *A. dumetorum* and Paddyfield Warbler *A. agricola*. After some deliberation, the bird was identified

as the latter, on the basis of the following description and with the aid of Svensson (1970) and Williamson (1968).

In hand, initial impression of *Acrocephalus* warbler, pale sandy-brown above and buff-white below, with short wings and long tail. UPPERPARTS Crown olive-brown, slightly darker than mantle. Nape grey-brown; mantle pale sandy-brown, tinged olive. Rump distinctly rufous. Lores very dark brown; ear-coverts slightly rufous. Distinct, broad, whitish supercilium from just in front of to well behind eye. WINGS Slightly browner than mantle, with some wear on tips of primaries and secondaries. Longest tertial in left wing darker brown and conspicuously edged rufous (this feather missing in right wing). TAIL Pale brown and extremely worn. UNDERPARTS Throat white; breast, belly and flanks very pale buff; undertail-coverts white. BARE PARTS Upper mandible dark horn, with pale cutting edge; lower mandible pink, brighter towards base and darker

towards tip, but extreme tips of both mandibles pale. Inside of mouth pale yellow; tongue bright yellow. Tarsus very pale brown, paler to rear; soles of feet yellowish. Iris dark brown.

WING FORMULA 3rd and 4th primaries formed wing-point; 5th -1 mm, 6th -4 mm, 7th -7 mm, 8th -8 mm, 9th -9 mm, 10th -10 mm, 2nd -6 mm. Thus, 2nd primary fell between 6th and 7th. 1st primary 2 mm longer than longest primary covert. Outermost secondary 10 mm shorter than wing-point. 3rd and 4th primaries clearly emarginated, 5th less distinctly. Notch on inner web of 2nd primary 11 mm and on inner web of 3rd 10 mm, latter ill-defined.

MEASUREMENTS Wing 57 mm; bill (from skull) 15 mm, (from feathering) 9 mm; tarsus 24.5 mm; tail 50 mm (very rounded); wing tip to tail tip 31 mm; weight 8.0 g at 10.30 hours.

The bird was released into low cover and became very active, slipping easily through the vegetation looking for food. Occasionally it flitted within the cover to snatch at insects. In the field, it appeared even paler than in the hand, and the white throat, pale supercilium and long tail were conspicuous features (cf. Williamson 1954). BL commented that, apart from the length of the tail and lack of an eye-ring, it reminded him very much of an Olivaceous Warbler *Hippolais pallida*. It was watched by a number of observers sporadically until about 18.00 hours, but, despite careful searching, could not be relocated the following day. The bird was identified as Paddyfield rather than Blyth's Reed on the basis of the following observations and measurements:

- i short wing (57 mm)
- ii wing-point formed by 3rd and 4th primaries
- iii blunt wing, outermost secondary only 10 mm shorter than wing tip
- iv emargination on 5th primary
- v distinctly rufous rump contrasting with mantle
- vi distinct supercilium
- vii short bill (9 mm to feathering, 15 mm to skull).

None of these seven characteristics, however, except perhaps vi (the supercilium), was sufficient to clinch the identification, but taken together they proved conclusive.

This occurrence constituted the fifth record for Britain and Ireland, the fourth being found in the Isles of Scilly less than two weeks earlier, on 30th September 1974 (Flumm & Lord 1978). That bird was strikingly similar to ours and we agree entirely with the majority of the conclusions drawn from it. We, however, aged the Low Hauxley bird as being in its first year and suggest that the Scillies individual was too. D. B. Hunt's photograph of the latter's wings (in Flumm & Lord 1978) shows a degree

of wear on the primaries virtually identical to that of the Low Hauxley individual. Despite this wear, the primaries of both birds were certainly in far better condition than would be expected in an adult *Acrocephalus*



199-201. Paddyfield Warbler *Acrocephalus agricola*, Northumberland, October 1974 (B. Galloway) (see also plate 196)



warbler in mid October. The loss of the tail by the Scillies bird is admittedly most unusual for a first-year bird, but we feel that the 'physiological stress associated with displacement' postulated by Flumm & Lord to explain the rapid loss of tail feathers in advance of any primary moult could equally apply to a bird of the year as to an adult.

We both have handled Blyth's Reed Warblers (in Finland 1969 and in India 1978) and have watched Paddyfield Warblers in the field (in India 1978). Illustrations of Paddyfield Warblers in current field guides (e.g. Heinzel *et al.* 1974) are misleading because they do not show the variations in plumage which occur. Vaurie (1959) considered that there were three races of Paddyfield Warbler, nominate *agricola*, *brevipennis* and *tangorum*. The last can be dismissed since it has a distinctive head pattern; indeed, it was considered to be a race of Schrenck's Sedge Warbler (or Black-browed Reed Warbler) *A. bistrigiceps* by Williamson (1968). Vaurie regarded the breeding birds of Russia, southwest Siberia and Turkestan to be a duller, more olivaceous race, *brevipennis*; and brighter, more rufous individuals to be *agricola*, breeding in India. Williamson disagreed, suggesting rather that the Paddyfield Warbler is monotypic, with two plumage phases when adult: a fresh reddish-brown (*agricola*) phase, attained during autumn moult, and a duller, more olivaceous-brown (*brevipennis*) phase, resulting from the abrasion of the rufous feather tips. The rufous coloration returns in late February and March as a result of a pre-nuptial body moult, but is quickly lost. Those which we observed at Bharatpur, in late February 1978, had very rufous upperparts and could have just undergone such a moult.

Williamson stated that young Paddyfield Warblers undergo a body moult into first-winter plumage while still in their natal area, but the feather tips, as with adults, appear to wear quickly, so that a first-winter bird from Bengal, dated 21st September, 'is similar in its dull olive-brown coloration to winter adults'. The one which occurred on Fair Isle, Shetland, in 1953 was aged as a first-year and described as 'pale reddish-brown above'. It was trapped on 16th September, a date early enough for little wear of the body plumage to have occurred. The two 1974 Paddyfield Warblers were found, respectively, two weeks and four weeks later, and had presumably undergone such wear to produce the pale, olive-tinged upperparts which so confused observers. It was interesting to read that the possibility of Booted Warbler *Hippolais caligata* was considered for the Scillies bird; the mantle colour of that at Low Hauxley was very similar to (although not quite so pale as) that of Booted Warblers we observed on Fair Isle in August 1976 and August 1977.

At least in India, where it was not clouded by the presence of Reed or Marsh Warblers, separation of Paddyfield and Blyth's Reed Warblers was not difficult. Blyth's Reed always appeared rather dark greyish-olive on the upperparts, including the rump, and never showed a significant supercilium. We feel that the field identification of a Paddyfield Warbler, even as an autumn vagrant in Britain, should provide fewer problems than that of Blyth's Reed Warbler. The separation of a first-year example of the latter from a young Marsh or a young Reed in the field poses grave

problems, despite the published structural differences (Sharrock *et al.* 1970 and Wallace 1973).

We agree with Flumm & Lord that the possibility of a vagrant Swinhoe's Reed Warbler (or Blunt-winged Paddyfield Warbler) *A. concinens* reaching western Europe—although slight—cannot be dismissed. When the Low Hauxley bird was caught, this species was not considered, but the wing-formula details are sufficient to rule it out: the 2nd primary fell between the 6th and 7th, whereas in *concinens* it should fall between the 8th and 10th. Some authors have treated *A. concinens* and *A. agricola* as conspecific (e.g. Dementiev & Gladkov 1954) and there seems to be a general consensus (e.g. Ali & Ripley 1973, King *et al.* 1975) that the two cannot be separated in the field. This, however, is perhaps yet another field identification problem which may be solved in time.

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Fifty years ago . . .

'“Can any of the Petrels walk on the toes? I think not . . .” Thus, Mr T. A. Coward sums up the question . . . [but] during my observations I have established that the Fulmar Petrel *can and does*—on occasion—*walk on its toes*.’ (*Brit. Birds* 23: 31, July 1929)

Announcement

Fifth Pan African Ornithological Congress Preliminary notice: the Fifth Pan African Ornithological Congress will be held in Lilongwe, Malawi, during 23rd–30th August 1980. Details of costs and proceedings will shortly be available from Len Gillard, Executive Secretary, Fifth Pan African Ornithological Congress, PO Box 84394, Greenside 2034, Johannesburg, South Africa.

Request

Colour-ringed Shelducks Detailed studies of Shelducks *Tadorna tadorna*, involving colour-ringing, are being undertaken at several localities in Scotland and northeast England by the universities of Aberdeen and Durham and the Nature Conservancy Council. Sightings of these birds would be valuable in studying their migration and dispersal. Observers are asked to send details of colours and relative positions of rings on each leg, together with any additional information, to M. W. Pienkowski, 1 West Fenton Cottages, North Berwick, East Lothian EH39 5AL.

News and comment

Peter Conder and Mike Everett

'WWF News', 'World Wildlife News' and 'World Wildlife News' The World Wildlife Fund has produced two of its periodicals in new formats, but this has not reduced nomenclatural problems if you are interested in the international fields of the WWF. First, a newspaper, *WWF News*, is the new journal of the WWF, the aim of which is to bring together all aspects of the organisation. Incorporated in it is the former *World Wildlife News*, which used to be issued from Morges and which is not to be confused with the journal of the same name issued by the British National Appeal which is mentioned below. The new newspaper is international in flavour, covering events in many parts of the world: Kenya, the Arctic, the Netherlands, Orkney and so on. It also records an important administrative development in that the Project Management Department is now working officially under the joint authority of the International Union for the Conservation of Nature and the WWF, with Peter Murphy as its new head. The creation of the new department means that the best use will be made of limited conservation resources to achieve conservation ends. This newspaper appears every two months and the English version can be obtained from WWF (BNA), 29 Greville Street, London EC1N 8AX.

The British National Appeal has also produced a smaller-format, colourful *World Wildlife News*, with a range of articles illustrated by photographs and paintings with eight pages in colour. It contains a bit of everything: news,

comment and articles, including one on how the WWF grants totalling over £66,000 were allocated in 1978 in Britain. This quarterly publication is issued free to members of the World Wildlife Fund (BNA), for which the annual subscription is £5.

Historic woodland saved The West Wales Naturalists' Trust has just announced the purchase of Castle Woods on the outskirts of Llandeilo, Dyfed, as a nature reserve. Funds for this, the largest purchase yet undertaken by the Trust, were provided by its Dyfed Wildlife Appeal (*Brit. Birds* 71: 425), together with generous assistance from the World Wildlife Fund and the Countryside Commission. In addition to the woodland, the Trust will also safeguard the wintering wildfowl on the water meadows and oxbow lakes between the woods and the Afon Tywi. Much of the area is designated a Site of Special Scientific Interest by the Nature Conservancy Council.

Manx wildlife stamps On 27th February 1979, the Isle of Man Post Office issued a set of stamps to commemorate the centenary of the Isle of Man Natural History and Antiquarian Society. The 6p stamp depicts P. M. C. Kermode, one of the Society's three founders, together with the sub-fossil shell *Nassa kermodei*. Although mainly known as a gifted antiquarian, Kermode was a great all-rounder and published the first reliable checklist of Manx birds. The Peregrine *Falco peregrinus* is the subject of the 7p

stamp, and a highly appropriate choice. In 1406, the Kingdom of Man with all its rights was granted to Sir John Stanley, on the service of rendering two falcons on paying homage, and two falcons to each King of England on his coronation day. In all probability, the presentation was last made by the Duke of Athol to King George IV in 1821. More recently, in 1941, Ken Williamson and Will Cowin founded the journal of the Field Section of the IOMNH&AS and called it 'Yn Shirragh ny Ree': *The Peregrine*. Since 1948, the annual Manx Bird Report has been published in *The Peregrine*, which has now been taken over by the Manx Ornithological Society. The 11p stamp features the Fulmar *Fulmarus glacialis*, which first bred on the Calf of Man in 1936 and has since become an increasingly common breeding bird all around the coast, with about 25 colonies and some 600 pairs. Finally, the Asilid fly *Epitriptus cowini* is shown on the 13p stamp. It was named in honour of its finder Will Cowin. For many years *E. cowini* was thought to be confined to the Isle of Man, but it has recently been discovered in Ireland.

The Peregrine and the Fulmar are not the first birds to be depicted on official stamps since the inauguration of the insular postal service in 1973. The 50p stamp showed the Manx Shearwater *Puffinus puffinus*. This was followed, in 1978, by the appearance of the Bald Eagle *Haliaeetus leucocephalus* on an 11p stamp celebrating the Golden Jubilee of the North American Manx Association and, later in the year, the Chough *Pyrrhocorax pyrrhocorax* became the subject of the new 50p definitive issue. The Manx 2p piece of 1971 depicted a pair of Peregrines, since replaced by a Manx Shearwater. (Contributed by Pat Cullen)

Birdwatching at water supply reservoirs We wonder how many birdwatchers are aware of *Information Leaflet No. 4* published by the Water Space Amenity Commission, 1 Queen Anne's Gate, London SW1H 9BT. This seems a most useful list because, in addition to naming and mapping the localities of those reservoirs where areas have been set aside for birds, it lists the authorities from which permits can be obtained. It is apparently free of charge.

Shetland birds That very useful booklet, *A Guide to the Shetland Birds*, by Bobby Tulloch and the late Fred Hunter has now been revised. The first 17 pages deal with descriptions of the best bird places on each of the islands; three pages cover general information such as transport and accommodation; seven pages are devoted to a systematic list of Shetland's breeding birds; four pages to a systematic list of migrants and winter visitors (for convenience of reference, it seems a pity that this list was not combined with the previous one); and the final 14 pages are devoted to a checklist of all the species recorded in Shetland. Line-drawings (by Bobby Tulloch and Jonathan Wills) and black-and-white photographs (by Bobby Tulloch and Dennis Coutts) evoke the atmosphere of this exciting corner of Britain. This booklet will be welcomed by all visitors to Shetland and is a valuable work of reference for those of us who wish we could go there more often. It is available (£1.50 plus 30p postage and packing) from the Shetland Times, Lerwick, Shetland. (Contributed by JTRS)

'Pitsea Marsh and Group Report'

One lesson to be learnt from this report is that small groups of private individuals, if they work hard enough, can be successful in stimulating the interest of local councils in potential nature reserves. V. S. Wiseman and J. H. Smart are the editors of the Basildon Ornithological Study Centre's *Pitsea Marsh and Group Report, No. 2, 1978*, which is obtainable from the editors at 7 Elmtree Road, Pitsea, Basildon SS16 4TN. The first part of the report is taken up by the summary of evidence given by Victor Wiseman for the BOSC at a public enquiry into the proposal for constructing a bridge across the River Fleet. A second section describes the ornithological year, 1978, on Pitsea Marsh, Belfairs Marsh Nature Reserve. The last series of notes relates to the activities on Pitsea.

What impressed us about this production was the legibility of the text, which was entirely handwritten and photocopied. It is perhaps not surprising that local councils are showing some sympathy for the drive and initiative of this group.



202. Presentation of engraved salver and cheque to Dr E. C. Fellowes, winner of the 1979 'Bird Photograph of the Year' award, by Bill Oddie; in background, G. V. Adkin (2nd-prize winner) and Donald A. Smith (one of the three 3rd-prize winners); April 1979 (Marie Xeridat)

Bird Photograph of the Year The 1978 award ceremony was held at a press reception in London on 24th April 1979.

The prizes were presented by TV star and expert birder Bill Oddie (see plate 202).

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

S. C. Madge and K. Allsopp

These are largely unchecked reports, not authenticated records

This report covers April, with some March and early May records; except where otherwise stated, all dates refer to April.

On the whole, it was a cold April, with the first week dominated by cyclonic conditions and a westerly airstream. Conditions improved with a spell of warmer weather and associated southerly winds during 9th-16th, which brought in a good influx of migrants. The colder weather returned for the remainder of the month, with a northerly airstream bringing migration almost to a standstill, although conditions improved again in early May.

Seabirds

Seabird movements are more of an autumn feature, but, although producing fewer rarities, spring seawatching can be most rewarding. A **Cory's Shearwater** *Calonectris diomedea* was seen off Brighton (Sussex) on 12th and there

were reports of rather more **Manx Shearwaters** *Puffinus puffinus* than usual from a few East Coast points. Spring **Pomarine Skuas** *Stercorarius pomarinus* in full plumage are always a delight to see: there were two off Blackpool (Lancashire) on 15th and singles off Heysham (also Lancashire) on 18th and Bundoran (Co. Donegal) on 19th, four in the Sound of Mull (Argyll) on 28th and a party of seven close inshore at South Stack (Anglesey) on 7th May. A single **Little Auk** *Alle alle* at Heysham on 4th was rather late for the west coast. A belated report came in of an immature **Bonaparte's Gull** *Larus philadelphia* at Grimsby Docks (Humberside) on 17th March. **Little Gull** *L. minutus* numbers built up in the southwest during mid month, with counts of 28 at Marazion Marsh (Cornwall) on 13th and 75 in the Lady's Island Lake/Tacumshin area (Co. Wexford) on 16th. The larger arctic

gulls were also noted from several sites during spring gull movements, the most interesting report concerning 15 **Glaucous** *L. hyperboreus* and single **Iceland Gulls** *L. glaucoides* at Killybegs (Co. Donegal) on 29th. During late March, there was a marked inland passage of **Kittiwakes** *Rissa tridactyla* across northern England, echoed by at least 120 which moved northeast at Rostherne Mere (Cheshire) on 31st March and 1st, 25 during 27th-29th March at Mansfield Reservoir (Nottinghamshire) and a total of 59 north at Winterset Reservoir (West Yorkshire) between 28th March and 1st.

Waterfowl

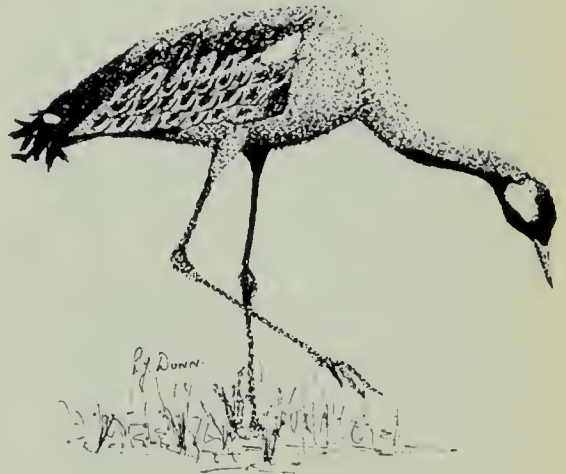
Most springs produce a few records of Nearctic ducks and this month had more than its fair share. Single drake **Ring-necked Ducks** *Aythya collaris* continued to appear, with reports from Ditchbard Gravel-pits (Northamptonshire) on 15th-18th, Heybridge Gravel-pits (Essex) on 27th, Crowdy Reservoir (Cornwall) on 28th, and a female at Abberton (also Essex) on 26th. A **Teal** *Anas crecca* with characters of the Nearctic race *carolinensis* was present at Marazion Marsh during 20th-27th and single drake **Blue-winged Teals** *A. discors* appeared on Ditchbard Gravel-pits on 13th and near Gloucester on 2nd May. A pair of **American Wigeons** *A. americana* was seen on Llangorse Lake (Powys) on 21st-22nd. Following up the mention in the February 'Recent reports' of a bird showing characters of the Nearctic race of **Bewick's Swan** *Cygnus columbianus*, known as the 'Whistling Swan', we now hear that this bird was seen on Loch Gill (Co. Kerry) in January and presumably the same bird at Ballycotton (Co. Cork) in February.

A rather strange-looking duck present on the River Blackwater (Essex) early in the month was considered probably to be a hybrid between a **Goldeneye** *Bucephala clangula* and a **Smew** *Mergus albellus*, and yet another **Barrow's Goldeneye** *B. islandica*, no doubt of rather dubious origin, was at Abberton from 18th-25th.

Herons, storks, waders, etc.

April normally produces a series of records of the rarer herons and this year is no exception. Although we have

not yet heard of any **Little Egrets** *Egretta garzetta*, there was a **Great White Egret** *E. alba* near King's Lynn (Norfolk) on 14th. **Cattle Egrets** *Bubulcus ibis* are often kept in captivity, but reports are, nevertheless, of interest: one stayed at Witton-le-Wear (Co. Durham) from 15th-17th, flying off to the northwest on the latter date; this could well have been the bird which spent 10th May feeding among cattle at Loch of Kinnordy (Angus). A **Purple Heron** *Ardea purpurea* was seen at Benacre (Suffolk) on 17th, followed by two at Hickling (Norfolk) on 5th May and another at Slapton (Devon) two days later. Single **White Storks** *Ciconia ciconia* also appeared, flying over at Hunstanton (Norfolk) on 6th, near Maryculter (Grampian) on 25th and moving northwest over Thornton Cleveleys (Lancashire) on 4th May. Associated with these was a scattering of **Spoonbills** *Platalea leucorodia* in Norfolk, Suffolk, Lancashire and Northumberland and **Cranes** *Grus grus* at Chollerford (Northumberland) from 1st-12th, Benacre



on 16th, Burniston (North Yorkshire) from 20th and a party of five flying over Ashford (Kent) at about this time.

There were several records of **Kentish Plovers** *Charadrius alexandrinus* in the southeast from 11th and two at Cley (Norfolk) on 15th; earlier there had been one inland at Ditchbard Gravel-pits. The only other notable small waders were single **Pectoral Sandpipers** *Calidris melanotos* at Hayle (Cornwall) on 18th and at Holkham (Norfolk) on 6th May. A brief appearance of a **Baird's Sandpiper** *C. bairdii* on Tees-side (Cleveland) on 5th May thwarted a number of local twitchers.

Raptors

The warm spell in mid month brought in a number of interesting raptor records. Some very early **Honey Buzzards** *Pernis apivorus* were noted: singles on 10th at Sandwich (Kent), which nearly caught itself in a mist-net, Canterbury (also Kent) on 15th, Rainham (Essex) and way up north at Pennyghael, Mull (Argyll) on 18th and at Slapton on 4th May. An early **Osprey** *Pandion haliaetus* at Hornsea Mere (Humberside)



on 25th March was followed by a good scattering from 7th, particularly during 14th-16th, from Devon, Kent, Essex, Suffolk, Derbyshire, Lancashire, North and West Yorkshire and Co. Durham. A **Black Kite** *Milvus migrans* was watched at South Ockenden (Essex) on 19th and 20th and another was seen over Bethesda (Gwynedd) at about the same date. Meanwhile, wandering **Red Kites** *M. milvus* turned up in Cornwall, Devon, Kent, West Midlands, Lincolnshire and Cheshire during the month. There were also a few lingering **Rough-legged Buzzards** *Buteo lagopus* in the east and southeast of England, with late ones reported from Fair Isle (Shetland) on 28th and Sandwich on 29th. Fair Isle also produced two female **Snowy Owls** *Nyctea scandiaca* on 16th and a male from 19th-22nd.

Landbirds

The bulk of migrants came into the country in mid-month. Ten **Hoopoes** *Upupa epops* were reported from Devon and Cornwall and four from the Portland area (Dorset) during Easter alone. Single **Great Spotted Cuckoos** *Clamator glandarius* arrived at Pentire Head (Cornwall)

from 11th-13th and on Bryher (Isles of Scilly) also on 13th. A number of rarities were reported from southern England on 14th: a **Sardinian Warbler** *Sylvia melanocephala* at Weybourne (Norfolk), a **Red-throated Pipit** *Anthus cervinus*, which was located among a roost of Yellow Wagtails *Motacilla flava* at Stodmarsh (Kent), a **Red-rumped Swallow** arrived on St Agnes (Isles of Scilly), moving about the islands during the following weeks, and a **Black-headed Bunting** *Emberiza melanocephala* at Cley (another turned up on St Agnes on the following day), staying into early May. Earlier than these, there had been a male **Rustic Bunting** *E. rustica* at St Abbs (Borders) on 8th and a **Barn Owl** *Tyto alba* with the characters of the race *guttata* at Tetney (Lincolnshire) on 12th. A **Skylark** *Alauda arvensis* which was closely watched at Sandwich on 22nd was considered probably to have belonged to one of the eastern races. Four **Bee-eaters** *Merops apiaster* stayed at Thorndon Park (Essex) during 23rd-25th, and another was watched near Chalfont St Giles (Buckinghamshire) on 27th. Completely out of context with any of these occurrences was a **Song Sparrow** *Zonotrichia melodia* on Fair Isle on 17th.

The commoner migrants had trickled in during the first week, producing a remarkable record of a **Nightingale** *Luscinia megarhynchos* in full song near Portadown (Co. Armagh) on 3rd. Generally speaking, it seems that those species that arrive first were later and in smaller numbers than usual; whereas those that normally arrive in mid month (e.g. **Grasshopper Warbler** *Locustella naevia*, **House Martin** *Delichon urbica* and possibly also **Redstart** *Phoenicurus phoenicurus*) came in in good or even higher than usual numbers. With the return to a cool northerly airstream during the last ten days of the month, however, migration slowed down to a trickle before another influx in early May.

Latest news

Two 'seconds' in first ten days of June: **Ruppell's Warbler** *Sylvia rueppelli* on Lundy (Devon) (first in Shetland in August 1977) and **Cretzschmar's Bunting** *Emberiza caesia* on Fair Isle (where first in June 1967). Also **Red-rumped Swallow** *Hirundo daurica* at Holme (Norfolk).

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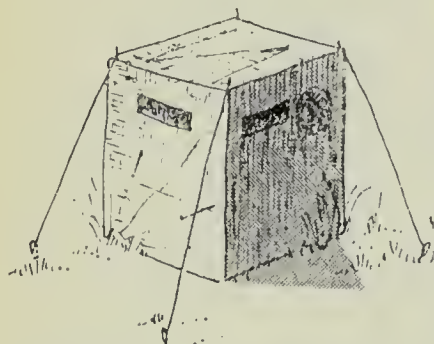
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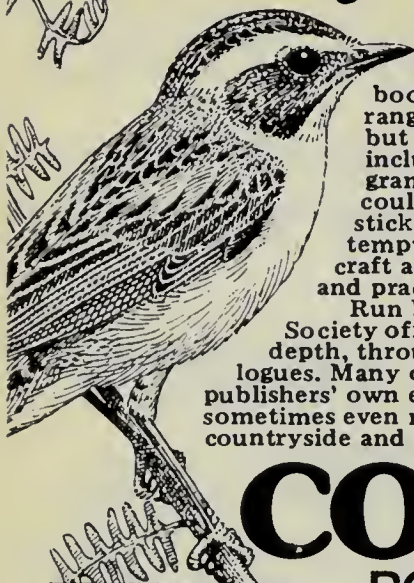
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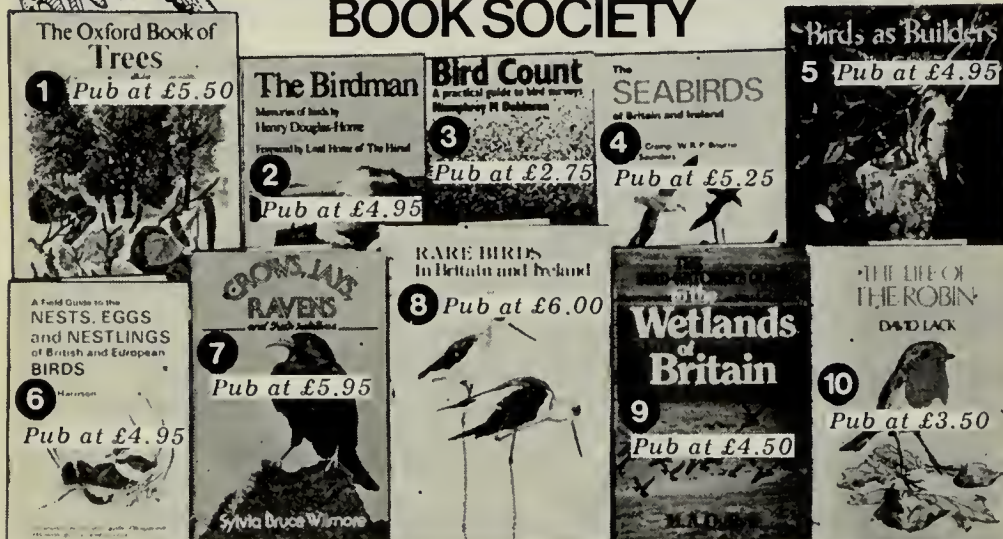
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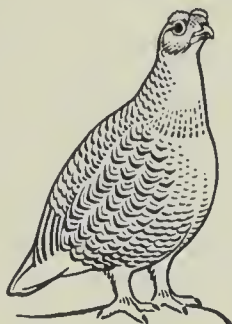
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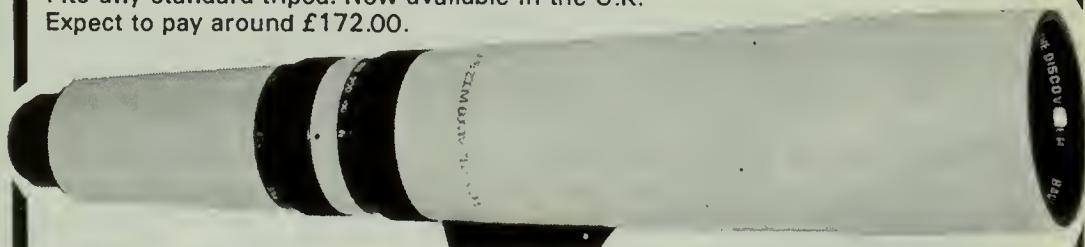
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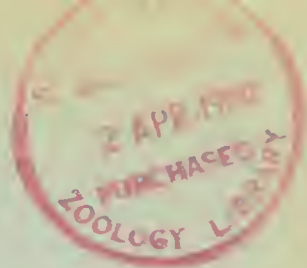
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British Birds

VOLUME 72 NUMBER 8 AUGUST 1979



Rare breeding birds in the United Kingdom in 1977

*L. A. Batten, R. H. Dennis,
Ian Prestt and
the Rare Breeding Birds Panel*



N.A.

We wish to stress once again that the main aim of the Rare Breeding Birds Panel is to provide a safe repository for confidential data. Full information is vital to fulfil the panel's function as an archive for posterity. Similarly, correct long-term conservation planning depends on accurate knowledge of status, which can be assessed only if the detailed data are all available in one place.

We feel that the panel's reliability is now established: no 'leak' has ever occurred. We urge all recorders, therefore, to supply the fullest possible information. At present, data are very variable. Some counties supply six-figure map references, such information as habitat details, clutch or brood sizes and dates of every observation, as well as comments and conservation advice; others send minimum details, such as 'one pair bred, site secret'; and a few withhold all their records. We believe that it is in the best interests of the birds for the fullest possible details to be deposited in our central files.

This annual report, the panel's fifth, is a subsidiary part of our work. Only the barest details are summarised, but we feel that it is correct to reveal basic information, with permission, when to do so does not threaten the birds. Unnecessary secrecy breeds speculation, rumour and, possibly, an unhealthy interest in rarities. We attempt to give an honest account of the rarest breeding birds in the United Kingdom and hope thereby to foster a responsible desire to document their changing status.

During 1977, the panel's members were A. W. Colling, R. H. Dennis, I. J. Ferguson-Lees, Ian Prestt and Dr J. T. R. Sharrock (secretary). The

panel is supported morally and financially by *British Birds*, the BTO and the RSPB; it also includes a representative of the Nature Conservancy Council. In 1978, A. W. Colling, the NCC representative, retired from his post and from the panel. With the necessary approval of the editorial board of *British Birds* and of the Councils of the BTO and RSPB, another NCC staff member, Dr L. A. Batten, filled the vacancy.

Most records reach the panel from the county and regional recorders and editors (for names and addresses, see *Brit. Birds* 70: 356-360 and an updated list which will be published in next month's issue): individual observers are strongly encouraged to submit their data in this way, although a few do send them direct. Forms are available free from the address at the end of this report; two copies should always be sent in on these special forms, which are filed under lock and key in two separate places as a safeguard against loss by fire, and to which only the panel's secretary has direct access.

As usual, counties are named here only when permission has been given. In other cases, code letters are used: these are the same as in earlier reports, so that histories of decline or colonisation can be followed, even though the locations must remain confidential to ensure freedom from disturbance. This report contains a mixture of new and old county names: we have used those supplied by the recorders, since conversion of old names could, in some cases, reveal information about the location of breeding sites.

Fig. 1. Areas covered by this report. Records (or negative returns) were supplied for all the areas shown black. The panel does not collect records from the Republic of Ireland



For most species, we have given a range of figures for 'pairs breeding', the lower representing the number confirmed breeding and the upper the maximum if, for instance, every singing male or single sighting represented a nesting pair. Although these ranges are often very wide, they can be consistently calculated each year and will, we hope, be valuable for comparisons.

In 1976, only two counties withheld records from the panel (see *Brit. Birds* 71: 12). Regrettably, rather more did so in 1977 (see fig. 1), although we suspect that this was an oversight rather than a positive wish not to co-operate.

We apologise for the late appearance of this report. Plans to produce it for the January issue went sadly amiss; we aim to resume our usual schedule by publishing our 1978 report in January 1980.

The year's highlights

The summer of 1977 was notable for some very pleasing and encouraging developments. Black-necked Grebes *Podiceps nigricollis* were reported from six counties, compared with a maximum of three in the previous four years. Marsh Harriers *Circus aeruginosus* also did well, with the highest totals of breeding females and of young fledged for at least ten years. Spotted Crakes *Porzana porzana*, although yet again not proved to breed, were more widespread than for some years, with perhaps as many as eight singing males. Red-necked Phalaropes *Phalaropus lobatus* are not faring well in the UK as a whole, so it was remarkable and pleasing to have successful breeding in a new Scottish mainland county. Having shown signs of colonising Britain for years, Mediterranean Gulls *Larus melanocephalus* came one step nearer, with a breeding attempt—the third involving a pure pair—in a new county.

The events of 1977 provided some remarkable contrasts: in the south, warmth-loving Hoopoes *Upupa epops* achieved a record total of four pairs breeding in a single year and Savi's Warbler *Locustella luscinioides* had a good year, with 24 singing males and three pairs confirmed breeding; whereas, in the north, long-lasting snow encouraged Lapland Buntings *Calcarius lapponicus* to stay to nest for the first known time and may also have influenced the Shore Larks *Eremophila alpestris* which not only nested but had their nest found (cf. *Brit. Birds* 66: 505-508, 67: 127). Also in Scotland, Red-backed Shrikes *Lanius collurio* joined Wrynecks *Jynx torquilla* to create a situation which would have amazed ornithologists in the 1950s when both species were contracting southwards and as yet showed no signs of a northern colonisation (the Scottish populations of both species doubtless derive from migrants diverted en route to Scandinavia).

But when will Serins *Serinus serinus* colonise (*Brit. Birds* 61: 87-88, 64: 213-23)? And what about the predicted Fan-tailed Warblers *Cisticola juncidis* (*Brit. Birds* 70: 152-159)?

Finally, on a more sobering note, we draw attention to the fact that Bittern *Botaurus stellaris* has now been added to our list, at the request of several recorders, in view of the decline in its breeding numbers in Britain.

Systematic list

There were no relevant records of the following species in 1977:

Great Northern Diver *Gavia immer*
Scaup *Aythya marila*
Rough-legged Buzzard *Buteo lagopus*
Sanderling *Calidris alba*
Spotted Sandpiper *Actitis macularia*
Turnstone *Arenaria interpres*

Black Tern *Chlidonias niger*
Citrine Wagtail *Motacilla citreola*
Bluethroat *Luscinia svecica*
Great Reed Warbler *Acrocephalus arundinaceus*
Great Grey Shrike *Lanius excubitor*
Serin *Serinus serinus*

Red-necked Grebe *Podiceps grisegena*

One site: one possibly summered.

Gwynedd One site: single adult in summer plumage 16th to 18th May and again 20th August to 14th September. In 1976, similar adult seen on nearby lake on 15th August.

This is the fourth successive year in which this species has featured—albeit marginally—in these reports.

Slavonian Grebe *Podiceps auritus*

Census data incomplete, but at least 42-51 pairs breeding, at 15 sites.

Inverness Main area, 39-42 pairs at nine sites: (1) 11-12 pairs (five nests robbed); (2) 17-18 pairs; (3) one pair; (4) two pairs; (5) three pairs, unsuccessful owing to water levels; (6) three pairs; (7) one pair, robbed; (8) one pair, robbed; (9) one pair, possibly from site 7 or site 8.

County A One site: four pairs, three broods seen and four or five young reared.

County B Four sites: (1) one pair probably bred; (2) one pair present April, but did not stay; (3) one pair on 6th April, three birds on 9th April, but no proof of breeding; (4) one on 21st May.

County C One site: one on 3rd-6th July; no suggestion of breeding, but locality suitable.

Numbers good, but breeding success poor; egg-collecting prevalent and at least seven nests were robbed; in other main area (data not included), numbers average, but poor success.

Black-necked Grebe *Podiceps nigricollis*

Seven sites: at least 11 pairs (three sites), plus summering individuals at four sites.

County A Two sites: (1) 22 adults on 3rd April, then dispersal to other sites, three pairs nested, two broods (one and one) on 6th August; (2) seven pairs with 16 young, brood sizes uncertain, but definitely four broods (three, three, three and two).

County B One site: one adult 9th April in suitable habitat.

County C One site: one adult 10th-27th March, at former breeding locality.

County D One site: one pair with two recently hatched young in June.

County E One site: one adult present from spring to 28th August.

County F One site: three adults on 12th June, one on 13th.

1975 County E One site: one in breeding plumage 1st-23rd May.

1976 County E One site: one in partial breeding plumage 21st-24th March.

A better year, especially at site 2 in County A, where good breeding success. Data incomplete, as no count from main site in County B. In no year since before 1973 has more than three counties been featured.



Bittern *Botaurus stellaris*

This species has not previously appeared in one of these reports. Fifteen sites; habits make confirmation of breeding very difficult.

Kent One site: two males booming from April to early July.

Lancashire One site: 11 males booming at Leighton Moss.

Lincoln/South Humberside One site: one January to November, male booming in May, two seen 14th July.

Norfolk Five sites: (1) three males booming; (2) two males booming; (3) (4) (5) single males booming. These eight boomers compare with 60 in 1954.

Suffolk Two sites: (1) seven pairs at Minsmere (cf. 13 pairs in 1976); (2) eight males booming.

County A Four sites: (1) (2) sight records of singles in June; (3) (4) single males booming.

County B One site: one seen flying into reed-bed on 3rd June.

These 0-40 pairs breeding compare with the estimate of 'about 80' in *The Atlas* and the more accurate calculations by J. C. U.-Day and J. Wilson (*Brit. Birds* 71: 285-300) of 79-83 in 1954, 68-72 in 1970 and 45-47 in 1976.

**Black Duck** *Anas rubripes*

One female present in one site.

Cornwall One site: one female present until at least 16th May and reappeared on 29th August; often in association with Mallards *A. platyrhynchos*; individuals suspected of being hybrid offspring were reported.

Pintail *Anas acuta*

15 sites: 10-26 pairs breeding.

Angus One site: one pair present 20th April to 30th July.

Caithness Two sites: (1) two pairs in May, female with six young on 29th June; (2) one pair on 1st July, behaviour suggested breeding.

Cambridge One site: five males in May, two broods later.

Inverness One site: one pair present April to 26th May.

Kent Two sites: (1) one pair, female with nine young in first week of July; (2) one pair 18th-31st May, male 1st-19th June and female 13th-26th August.

Orkney Eight sites on three islands involving a possible total of 14 pairs, six of which were proved breeding: (1) four pairs bred and four females seen with ducklings on 11th July; (2) two pairs in late March, brood of ducklings seen 13th June; (3)-(6) single pairs in May; (7) three females, all believed to be nesting; (8) one pair on several dates, distraction display seen on 23rd June and 2nd July.

An average year, although the number of pairs possibly breeding was the highest since these reports started. The 1973-77 totals have been 3-5, 10-11, 12-25, 6-16 and 10-26.

Common Scoter *Melanitta nigra*

12 sites: 10-35 pairs breeding.

Caithness Eight sites, six pairs proved breeding and a further 13 pairs possibly breeding: (1) six males and four females, one female on eight eggs on 12th June, five females, and one with four young on 10th July; (2) pair on 12th June, female with eight young on 10th July; (3) female

with seven young on 17th July; (4) two females with broods on 31st July; (5) four pairs on 12th June, single duckling on 3rd August; (6) one pair on 17th May; (7) one pair on 4th June; (8) one to three pairs on 7th June.

Inverness One site: one pair probably nesting.

Shetland Two sites: (1) up to four pairs at usual loch, 'breeding not proved, though probable'; (2) brood of ducklings observed.

Stirling One site: three pairs proved breeding, clutches of eight and 14 found on 11th-12th June, but no young seen, a further six pairs and one male present; clutch of 14 thought to be product of two pairs which were in the area.

1976 Shetland Two sites: (1) brood of two ducklings; (2) at least one pair probably bred.

Data incomplete, as no information from large breeding population in Co. Fermanagh, and two regular nesting grounds in Scottish Highlands were not visited. The late 1976 records raise the total for that year to 22-159 pairs breeding.

Goldeneye *Bucephala clangula*

Nine sites, but breeding not suspected at five of them; at least six or seven pairs breeding.

Essex One site: singly on 15th June and 19th July; well-watched area and breeding not suspected.

Gwynedd Three sites: (1) female on 20th June; (2) male and female from 7th June to 14th August; (3) immature on 8th June. No suggestion of breeding, but increasing tendency towards summering is worth reporting (there were a few sightings in May-June 1975 and 1976).

Highland Four sites: (1) three pairs, female with five young, at least two clutches of eggs deserted; (2) at least one and probably two pairs, one clutch of eggs deserted, possibly one brood of young hatched; (3) one pair, six young fledged; (4) one pair, clutch of eggs deserted.

Lothian One site: immature male from winter until 17th July; adult female from 18th June to 17th July. No suggestion of breeding.

Colonisation of Scotland continued, but poor breeding success; at least six and probably seven females laid eggs, but very cold spring resulted in clutches being deserted; only two broods definitely reported.

Honey Buzzard *Pernis apivorus*

At least eight sites: two pairs confirmed breeding.

Bedford One site: one seen in July in suitable habitat, but not on subsequent visits.

Hampshire 'At least three males through summer.'

Norfolk One site: pair from 1st June, three flying young in August.

Yorkshire One site: one summered May to August, display seen, a second individual seen on 3rd September.

Nottingham 'Presence acknowledged.'

County A One site: regular sightings from May to September, and pair displaying on 29th May.

County D One site: pair seen on 20th and 21st May, but not on subsequent visits.

County E Two sites: (1) nest with two eggs on 26th June, but breeding failed; (2) one on 24th April and two on 1st June.

Widespread records, including two cases of confirmed breeding, suggest little change in the general position: reported totals of pairs breeding during 1973-77 have been 1-2, 2-6, 0-5, 1-9 and 2-10. The continuing absence of full information from the main breeding area in the New Forest makes it impossible to assess the actual breeding population; we hope that full details for this and for past years will eventually be deposited in our files.

Red Kite *Milvus milvus*

Total of 35 pairs: 33 nests, of which 12 successful with 17 young reared.

County A No pairs; one unattached individual in April.

County B Two sites: (1) (2) pairs nested but failed to rear young.

County C 25 sites: (1)-(4) two young reared; (5)-(8) one young reared; (9)-(21) pairs nested but failed to rear young; in one instance, pair built nest, but female poisoned before eggs laid, replacement female did not lay; (22)-(25) pairs partly built nests, but did not lay eggs. A further 14 or more unattached individuals present.

County D Four sites: (1) two young reared; (2) one young reared; (3) pair nested but failed to rear young; (4) two birds present, but no nest found. Also two unattached individuals in April.

County E Three sites: (1) one young reared; (2) pair nested, but failed to rear young; (3) two birds present, but no indication of breeding.

County F One site: one young reared.

Including those in County C which only partly built nests, the number of pairs and number of nests were the highest noted in these reports, but the numbers of successful nests and young reared were lower than in 1975 or 1976.

Marsh Harrier *Circus aeruginosus*

13 sites: 16-17 pairs breeding (including two females mated to one male), rearing a total of 44 young.

Humberside One site: one pair reared two young, where prospecting, but no breeding, noted in 1975 and 1976 (see below).

Kent Two sites: (1) one pair summered and female seen carrying nest material on one occasion, but breeding not confirmed; (2) one to three present from 26th April to 2nd June.

Lancashire One site: breeding attempt by one pair foiled when grass field cut for hay.

Norfolk Five sites, six pairs reared 19 young: (1) one pair reared four young; (2) two pairs reared five and four young; (3) one pair reared two young; (4) one pair reared four young; (5) one pair, but no nest.

Suffolk Four sites, eight females and seven males reared 23 young: (1) Minsmere: one pair reared four young, second pair failed, third male was mated to two females which reared four and two young; (2) one pair reared four young; (3) two pairs reared three and two young; (4) one pair reared four young.

1975 Humberside Two sites: (1) adult male in April, displaying and nest-building; (2) female summered.

1975 Kent One site: two (both considered to be immature) summered.

1976 Humberside One site: male and female in April, displaying and nest-building.

1976 Kent One site: one (probably female) summered.

The 1977 totals of breeding females and of young fledged were the highest for over ten years.

Montagu's Harrier *Circus pygargus*

Two sites: one breeding attempt which failed.

County D One site: nest with eggs in crops, but eggs disappeared.

County E One site: one pair possibly breeding, but no details supplied to us.

The slight improvement noted last year was not sustained. Totals of pairs breeding during 1973-77 have been 2-3, 0-3, 0-3, 3-5 and 1-2.



Goshawk *Accipiter gentilis*

19 sites: 2-19 pairs breeding, but no young known to have been reared.

County C One site: present, but no other information supplied.

County D One site: pair and one extra bird (probably female) displaying on 18th February, old nests built up in April, and in June, when nest-tree showed signs of having been climbed recently; human predation probably regular.

County F One site: adult female present, built 'frustration nest'.

County K Three sites: (1) one pair reared at least one young; (2) (3) pairs did not attempt breeding.

County L Two sites: (1) adult male on 7th April; (2) pair displaying on 7th April. Probably did not breed, although Goshawks seen at both of these sites in previous years.

County N One site: one pair nested, but eggs found broken.

County O Three sites: (1)-(3) present, but no other information supplied.

County Q Four sites: (1)-(4) pairs present and possibly/probably breeding.

County R One site: one pair probably breeding, seen early spring, displaying on 3rd April and 15th May, present in summer.

County S Two sites: (1) (2) pairs displaying.

1976 County P Four sites: (1) one pair reared at least two young; (2) one pair reared two young; (3) one pair, but no evidence of nesting; (4) one pair possibly present.

Information on this species is still being withheld for certain areas, but the data submitted suggest continuing spread. Totals of pairs breeding during 1973-77 have been 6-12, 8-17, 4-31, 11-22 and 2-19.

Osprey *Pandion haliaetus*

20 sites: seven successful pairs reared 13 young.

Inverness Loch Garten: pair laid three eggs in usual nest and reared two young; male was same as in 1974 and 1975.

Perth Loch of Lowes: male only early in season; female later, but no breeding attempt.

Scotland 18 sites: (1) pair laid four eggs (first four-egg clutch known in Scotland this century) robbed by egg-collectors; (2) pair laid eggs, failed; (3) pair reared three young; (4) pair laid two eggs, one young reared; (5) pair laid three eggs, failed; (6) new female arrived late in spring, non-breeding pair; (7) pair reared two young; (8) pair laid three eggs, failed; (9) pair reared two young; (10) pair laid three eggs, failed; (11) pair laid eggs, failed; (12) pair laid eggs, failed; (13) non-breeding pair all season; (14) pair reared two young; (15) non-breeding pair all season; (16) non-breeding pair built new eyrie; (17) new pair built eyrie, but no proof of breeding; (18) new pair reared one young.

Bad weather resulted in late start to the breeding season, and three old established eyries were not occupied by breeding pairs; 14 pairs laid eggs, one nest was robbed (third year in succession that Osprey eggs have been taken in Scotland), six pairs had difficulties during incubation almost certainly due to males being unable to catch enough fish for incubating females in very cold spring, all these eggs failed to hatch or were broken or eaten; remaining seven pairs reared 13 young. A poor year: the lowest number of young since 1972.

Hobby *Falco subbuteo*

Over 99 sites: 48-115 pairs breeding with a total of at least 73 young reared.

Avon Three sites: (1) one pair bred; (2) one pair probably bred; (3) one pair possibly bred.

Bedford Six sites: (1) one pair reared two young; (2) pair seen early August to mid September, behaviour suggesting breeding; (3)-(6) singles in suitable habitat, June-August.

Berkshire Two sites: (1) pair in July; (2) one pair with two juveniles on 15th August, up to three in area until 11th September.

Cambridge Two sites: (1) one pair reared two young; (2) one pair bred.

Devon 'A good season, but with a drop in number of young fledged compared with 1976', but details have been withheld.

Dorset 15 sites, with nesting confirmed at eight, of which three certainly failed, and only six (or perhaps a few more) young reared; seven other pairs present in breeding territory.

Hampshire In New Forest area, only isolated records sent to recorder, so not possible to indicate breeding populations. Elsewhere, four sites: (1) (2) single pairs reared two young; (3) one pair reared one young; (4) one pair nested, possible juvenile seen later.

Kent Two sites: (1) one pair reared three young; (2) one pair in July-August at traditional site.

Leicester Five sites: (1) one pair with two, possibly three, young in nest; (2) one pair with one young in nest; (3) one pair reared three young; (4) one pair with four flying young; (5) regular sightings.

Nottingham Two sites: (1) pair in same locality as in 1975 and 1976, possibly breeding; (2) pair in May, but then moved away.

Oxford Eight sites: (1) one pair reared three young; (2) one pair reared two young; (3) one pair nested, but outcome unknown; (4)-(8) sightings from late May to mid July.

Perth One site: pair displaying on 29th May, juvenile seen a few kilometres away on 13th August.

Somerset 11 sites, but no confirmed breeding: (1) pair on 3rd July; (2) up to three together 4th July to 8th September; (3) (4) possible nesting pairs; (5)-(11) singles, mostly on single dates, May-September.

Suffolk Four sites, but no confirmed breeding: (1) singly in May, June and July; (2) one seen on 23rd May and 5th June; (3) one seen 25th-29th June; (4) one seen from 21st May to 7th July.

Surrey 13 sites: (1) (2) single pairs reared at least two young; (3) (4) single pairs reared two young; (5) one pair laid two clutches, but both stolen from nest, probably by man; (6) one pair, eggs found below nest tree; (7) one pair, clutch did not hatch; (8) pair present all summer; (9)-(13) present. 'A very bad year, several regular sites produced no birds at all, and success in general was poor.' This followed a run of good years.

Sussex The Council of the Sussex Ornithological Society has released only the following data: six sites: (1) one pair confirmed breeding; (2) one pair probably breeding; (3)-(6) single pairs possibly breeding.

Warwick Six sites: (1) one pair, display observed; (2) one pair, adult with two young seen nearby in mid September; (3) one pair 'as usual', no details; (4) (5) single pairs 'probably successful'; (6) singly on many occasions.

Wiltshire Eight sites: (1) pair with four flying young; (2) one pair reared two young; (3) one pair reared one young; (4)-(8) pairs probably bred.

Worcester One site: one pair reared three young.

County E 15 sites: (1) (2) single pairs reared three young; (3)-(7) single pairs reared two young; (8) one pair reared at least one young; (9) one pair reared one young; (10) one pair bred, success unknown; (11) one pair bred, but reared no young; (12)-(15) single pairs.

1976 South Yorkshire One site: one, probably two, present during summer, but breeding not confirmed.

1976 County E Seven sites: (1) one pair reared three young; (2) one pair fledged three young, but one died; (3) one pair reared two, or perhaps three, young; (4) (5) single pairs reared two young; (6) one pair nested, but outcome unknown; (7) one pair present all summer.

We receive very detailed nest-by-nest information from some counties, yet others withhold all but the barest summaries. The submitted data, however, suggest the following totals of breeding pairs during 1973-77: 22-60, 43-91, 37-132, 58-139 and 48-115. The number of young known to have been reared was the highest since these reports started: 1973-77 totals have been 24, 49, 40, 69 and 74.

Spotted Crake *Porzana porzana*

Four sites with males singing, but no breeding confirmed and no pairs recorded.

Cambridge One site: up to four males singing 15th-20th May.

Derbyshire One site: male singing on 9th June; sightings of up to three in August/September.

Inverness One site: one or two males singing from 20th May to 23rd June.

Kent One site: male singing, 21st-22nd April.

These records confirm the scarce, irregular and scattered presence of this species in Britain during the breeding season.

Since 1972, the annual totals of reported pairs breeding have been 0, 0-5, 0, 0-1 and, now, 0-8.

**Avocet** *Recurvirostra avosetta*

Seven sites: 146 pairs reared 14 young.

Lincoln/South Humberside One site: up to three present fairly frequently from 20th May to 18th July, but no reports of breeding behaviour.

Norfolk Two sites, with successful breeding at one: (1) four pairs nested, one pair laid two clutches, two pairs each successfully reared three young; (2) one pair failed.

Suffolk Four sites, with successful breeding at three: (1) Havergate Island, 85 pairs reared total of only one young; (2) Minsmere, 52 pairs reared total of only three young; (3) one pair reared four young; (4) two pairs failed. Extremely low breeding success resulted from combination of cold weather and lack of insect food, plus some predation by Kestrels *Falco tinnunculus*, which wiped out practically all of both first and second broods.

The number of pairs remains high despite low breeding success of previous season.

Stone-curlew *Burhinus oediconemus*

The limited information available makes it impossible to indicate with any confidence the numbers breeding in Britain.

Berkshire Two sites: (1) several, 22nd May to 9th August, probably two pairs; (2) only one pair probably breeding in contrast to two or three in 1976.

Dorset Three sites: (1) pair on 28th May; (2) (3) heard at sites near first. Records incomplete.

Essex One site: singly on 22nd April and 6th June, pair on 18th May.

Hampshire 'Information so scanty that to list the few pairs found would give a very misleading picture.'

Norfolk 'No survey undertaken, but present at a number of localities.'

Oxford Four sites: (1) pair from May to 22nd July; (2)-(4) single pairs probably bred, but no data supplied.

Suffolk Coastal belt: three pairs, success unknown; Suffolk Breckland: numbers uncertain.

Sussex Two or three sites: two or three pairs, one proved breeding, but details not supplied to us.

Wiltshire Seven sites: (1) (2) two pairs; (3) one or two pairs; (4)-(6) single pairs; (7) details not available. At sites (1)-(6), two pairs proved breeding, one more probably bred and four or five possibly bred.

1976 Berkshire Additional site: (2) two young seen in May, possibly three pairs bred in the area.

The late 1976 record raises the total for that year to 17-114 pairs breeding. The 1977 total of three to over 26 is clearly completely unrepresentative.

Dotterel *Charadrius morinellus*

At least 12 sites, but data very incomplete.

Aberdeen/Banff One site: three seen, but no proof of breeding.

Grampian No details, but recorder reports: 'Breeding status as usual, breeding late due to snow on high ground, average production of young on high tops, slightly better on lower ground.'

Ross One site: one pair with two young 1st July.

County D Three sites: total of six pairs nested and one single bird present; nine young fledged.

County E One site: up to eight between 9th and 22nd May, but no proof of breeding.

County F Four sites: (1) one pair nested, one young fledged by 31st July; (2) one pair bred; (3) one pair probably bred; (4) two pairs on 22nd May.

The total of 9-20 pairs breeding is again hopelessly inadequate and unrepresentative. Once more, we have received no details from the main Grampian area, although these must have been obtained as a basis for the general comment which we have quoted.

Temminck's Stint *Calidris temminckii*

Three sites: 7-9 individuals; 5-7 possibly or probably breeding.

County A One site: one displaying 22nd-28th June, but no proof of breeding.

County B One site: five to seven birds (four or five displaying) on 1st June: probably bred but no firm evidence.

County C One site: one on 4th July (possibly also 7th July), but no suggestion of breeding.

Continued increase at main site, with up to seven present; successful breeding not proved, but it is considered unwise to search for eggs or young of this species; unusual breeding behaviour of this species makes assessment of number of pairs difficult.

Ruff *Philomachus pugnax*

Six sites; no confirmed breeding.

Caithness Two sites: (1) female on 12th June; (2) female from 15th-19th June. Males with ruffs seen at both sites in previous years, but breeding regarded as 'very unlikely'.

Cambridge/Norfolk One site: up to eight females in May, but few sightings in June. Breeding not confirmed.

Hebrides One site: behaviour of female in suitable breeding habitat suggested presence of young.

Humberside One site: up to 15 males and four females present until May, lekking behaviour observed, but area then flooded and birds left and breeding not suspected.

Kent One site: one male and immature female present 30th May to 1st June.

The total of pairs breeding (0-12) is relatively meaningless for this species. Of special interest, however, is the probable breeding record in the Hebrides, perhaps the first such instance in Scotland.

Black-tailed Godwit *Limosa limosa*

11 sites: 37-70 pairs breeding, with considerable success.

Cambridge None bred at two former sites: (1) none bred at site at which one pair was successful in 1973 and two pairs probably bred in 1974; (2) none bred at site at which one pair probably bred successfully in 1971, but not in 1973-77, although conditions were suitable.

Cambridge/Norfolk Ouse Washes: 52 pairs, of which at least 32 pairs, and probably also the majority of the rest, bred successfully.

Cumbria Two sites: (1) one pair reared four young, and at least one other pair possibly bred; (2) pair present in May and June, single in July: possibly breeding.

Kent One site: pair display-fighting, singing and making scrape in April; female disappeared from 28th April to 5th May, but pair displaying again 6th-11th May; male alone on 12th May, neither seen subsequently: probably attempted to breed, but were not successful.

Norfolk One site: adult mobbing human intruder on 6th June, probably had young. (See also Cambridge/Norfolk)

Orkney One site: one pair in June, thought not to have bred. One found dead on 29th June.

Shetland One site: one pair hatched young at usual site.

Somerset One site: six pairs almost certainly breeding (to avoid disturbance, no attempt made to find nests or young).

Suffolk Two sites: (1) one pair hatched young, and two other pairs possibly bred; (2) one pair hatched young.

County A One site: pair nested, but the three eggs vanished, perhaps due to predation by fox *Vulpes vulpes*.

With 5-18 (almost certainly 11-18) pairs breeding away from the main site on the Ouse Washes, and a successful year there, 1977 was a good year.

Wood Sandpiper *Tringa glareola*

Four sites: 2-5 pairs breeding.

Caithness One site: one seen 12th June, but no suggestion of breeding.

Grampian One site: one at new site 20th May and 14th June, but no suggestion of breeding.

Sutherland One site: one pair bred successfully.

County B One site: first displaying 13th May; two, possibly three, displaying 17th May; pair and young 27th June to 6th July; possibly another brood later.

1976 Perth CORRECTION One site: one pair in territory and possible change-over seen on 5th June (not 'five or six pairs in territory').

About average in recent years and it is encouraging that one regular site is maintained. A difficult species to census and several sites are not visited annually. The revised 1973-77 totals are 0-2, 1-4, 2-6, 1-3 and 2-5 pairs breeding.

Red-necked Phalarope *Phalaropus lobatus*

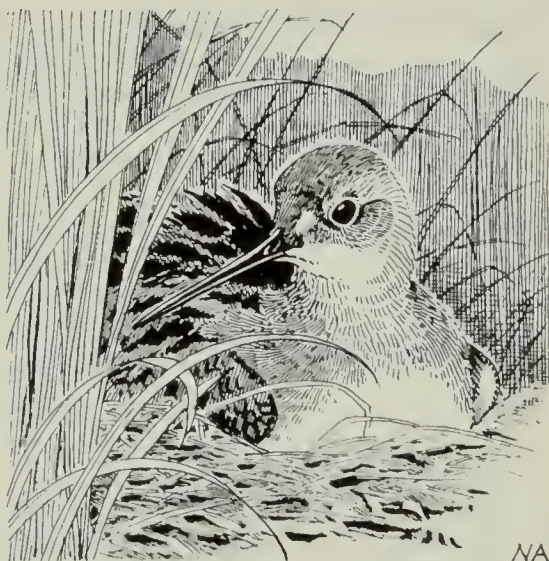
Seven sites: 20-31 pairs breeding.

Perth One site: one adult on 18th June, not seen on later visit.

Shetland Five sites: (1) 19-22 pairs bred; (2) (3) total of at least two (probably four) pairs probably nested; (4) two pairs seen on several occasions and probably bred; (5) at least one bird, but breeding not proved.

County B One site on mainland Scotland: pair arrived 7th June, nest and four eggs seen 28th June, all hatched 5th July.

A better year in the main breeding quarters in Shetland and encouraging to have successful breeding at a completely new locality on the Scottish mainland. No information from Western Isles.



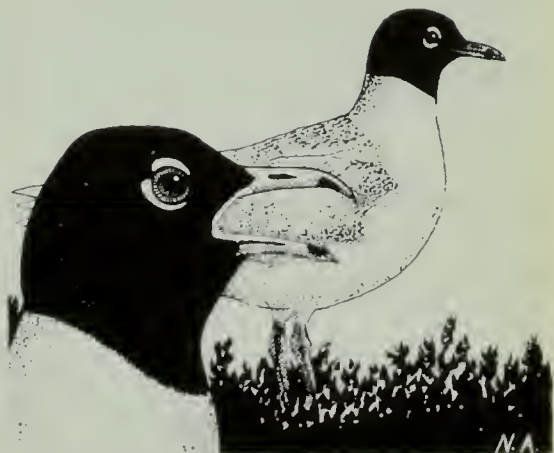
Mediterranean Gull *Larus melanocephalus*

Two sites: one pair nested, but unsuccessful.

County A One site: pair present for several days in May, one sat on a nest (apparently of Black-headed Gull *L. ridibundus*) on several occasions.

County B One site: pair laid eggs, one or two lost to predation, one addled.

The record in County B was only the third instance of nesting in Britain by a pure pair, the previous cases being in Hampshire in 1968 and 1976.

**Little Gull** *Larus minutus*

One site: several summered.

County C One site: two adults and five immatures summered; one adult seen carrying nesting material, and attempted to mate with an immature.

There has been only one instance of confirmed breeding (*Brit. Birds* 70: 331-332); summering records have recently been listed (*Brit. Birds* 71: 575; 72: 190).

Glaucous Gull *Larus hyperboreus*

One adult bred with a Herring Gull *L. argentatus*.

Shetland One site: same adult as in 1975 and 1976 paired with a Herring Gull and successfully reared two young at usual site; the nestlings were colour-ringed.

Snowy Owl *Nyctea scandiaca*.

Two sites: no breeding.

Shetland Two sites: (1) on Fetlar, at least five (possibly six) females in spring but all had left by 13th June, no male; (2) two females summered.

As in 1976, there was no adult male on Fetlar to breed with the female Snowy Owls on the island; no young males have yet re-appeared.

Hoopoe *Upupa epops*

Four sites: four pairs bred.

Avon One site: one pair hatched three young, of which two fledged.

Somerset One site: one pair reared one young; adults present from 21st May to 31st August; young stayed until 13th September.

Surrey One site: one pair reared two young, but one of the young was killed by a Sparrowhawk *Accipiter nisus*.

Sussex One site: one pair reared two young but both—as well as one adult—were killed, probably by a fox *Vulpes vulpes*.

With fewer than 30 cases of proved breeding in the last 140 years, four in one year is most remarkable. The last proven breeding record in the UK was in Sussex in 1971.



Wryneck *Jynx torquilla*

17 sites: 7-19 pairs breeding.

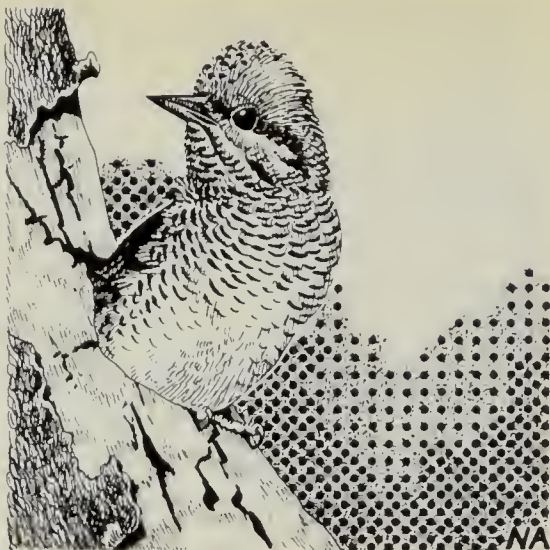
Hertford Two sites: (1) one pair bred; (2) adult seen feeding juvenile in July.

Inverness 12 sites, five pairs proved breeding, one probably breeding and six possibly breeding: (1) one pair reared young; (2) one pair feeding young in nest 2nd-18th July; (3) one pair mating, probably nested, but not proved; (4) one pair reared young; (5) one pair laid nine eggs, but no young reared; (6) one pair reared young, same nest as in 1975 and 1976; (7) one singing from 23rd May to 27th June; (8) one singing briefly in May; (9) one singing 17th June; (10) one singing 22nd-28th May; (11) one singing 3rd July; (12) one singing 31st May to 19th June.

Kent One site: one singing 26th-27th April.

Perth Two sites: (1) at least two, possibly three, singing 17th June; (2) one singing 12th June.

A very encouraging year and the Scottish population appears to be sustaining, with birds returning to nest in the same localities (and even the same tree). This is a difficult species for which to prove breeding and singing records could easily refer to successful nesting pairs.

**Shore Lark** *Eremophila alpestris*

Two sites: one pair bred successfully; other adults present.

Scotland Two sites: (1) two or three males in song in June; nest with three eggs 25th June, at least one juvenile 12th August to 7th September; (2) one adult on 23rd June.

A better year and first nest and eggs actually seen in the United Kingdom; young seen later in summer.

**Black Redstart** *Phoenicurus ochruros*

Now dropped from our lists (*Brit. Birds* 71: 13), but one late return.

1976 South Yorkshire Five sites: (1) pair reared four young; (2) pair reared at least two young; (3) pair in territory, but no evidence of breeding; (4) (5) total of four singing males.

These records raise the total of pairs breeding in 1976 to 33-81.

Fieldfare *Turdus pilaris*

Six sites: 4-6 pairs breeding.

Bedford One site: one at end of May appeared agitated.

Cumbria Two sites: (1) (2) single adults carrying food suggests young being reared at both.

Grampian Two sites: (1) one fledged young on 7th July; (2) adult singing on 8th July.

Stafford One site: 'one pair nested', but fuller details not reported.

1976 South Yorkshire One site: adult incubating on 28th April, but breeding not successful, perhaps due to predation by Carrion Crows *Corvus corone*.

The sporadic, rather scattered, breeding and attempted breeding of this recent coloniser is obviously continuing. The revised 1976 total is now three to nine pairs breeding.

Redwing *Turdus iliacus*

Seven sites: only one proved breeding record.

Grampian Two sites: (1) two apparently on territory 19th April, but no subsequent sightings; (2) one adult on 11th June.

Inverness One site: four singing males in spring, but no proof of nesting.

Lincoln/South Humberside Three sites: (1) one repeatedly carrying food on 22nd May; (2) one 12th-13th June; (3) one 11th-13th June.

Northumberland One site: one pair with fledged young, and another singing male.

1976 Inverness Second site: (2) pair mobbing Buzzard *Buteo buteo*, considered to be probably nesting.

The species is becoming very scarce after the peak years of 1968-72; some of the above records may refer to late spring migrants and thus seven sites may be optimistic. Only one proved breeding record is the lowest total this decade.

Cetti's Warbler *Cettia cetti*

41 sites: 13-154 pairs breeding.

Cornwall Five sites, but no confirmed breeding: (1) one 8th January to 8th June, pair 8th April; (2) one 9th April; (3) one male 28th May to 17th June; (4) one 2nd-3rd June; (5) one male 13th July, one female 20th September.

Devon Five sites with breeding proved at one: (1) at least six singing males until mid April, then three regularly to end of year, juveniles observed in July and August; (2) one male from January to 13th June, a male on 6th October, three or four at end of the year; (3) singing male and one other on 29th May, male heard into June; (4) one male present 8th May to 3rd July, one female throughout July; (5) one 1st January to 26th February, and three 25th October to 31st December.

Dorset Six sites: no confirmed breeding; no further details supplied.

Hampshire At least one site: 'A considerable number of records, but no proof of breeding'; two pairs possibly bred.

Isle of Wight Four sites: (1) male from 3rd April, female from 21st June, probably from 17th April; (2) singing bird 19th April; (3) singing bird on 8th May, 13th and 21st June; (4) singing bird on 24th July.

Kent Nine sites, 93 singing birds, 48 pairs, 12 proved breeding: (1) 13 territories, eight with pairs; (2) 59 territories, 35 with pairs; (3) four territories; (4) seven territories, four with pairs; (5) one pair; (6) one territory; (7) one territory; (8) one territory; (9) six pairs. There has been a 54% increase in the population of the first six sites since 1975.

Norfolk Five sites, but no confirmed breeding: (1) three singing all breeding season; (2) one singing 10th May to 31st July and again on 2nd October; (3) eight singing throughout breeding season; (4) 14 singing in breeding season; (5) two singing in spring.

Perth One site: one singing, but did not stay.

Suffolk Four sites: (1) one or two singing 10th April to 13th July and again in late autumn, one pair probably bred; (2) one pair present and another male singing; (3) one 5th May; (4) one 2nd June.

Worcester One site: one singing 26th May to 16th June.

There was a further increase in both the range and population of this species (1-14 pairs in 1973, 5-16 in 1974, 8-75 in 1975 and 8-80 in 1976). The number of sites occupied in summer away from Kent has increased from

none in 1973 to three in 1974, six in 1975, 12 in 1976 and now 32 in nine counties in 1977. It should be noted, however, that birds were reported for only one or two days at some of these sites.

Savi's Warbler *Locustella luscinioides*

13 sites: breeding confirmed at three; total of 26 singing males.

Devon Two sites: (1) singing male 10th May to 4th June; (2) singing male 14th-21st May.

Dorset One site: 'possibly two males, 9th May to 22nd August' (*Brit. Birds* 71: 519).

Hampshire One site: singing male 25th-29th June.

Humberside One site: two males singing, 12th May to 2nd July and 16th May to 4th June.

Kent One site: up to five singing males from 3rd April to 25th September; carrying food on 4th, 5th, 9th and 19th June; two pairs bred, probably successfully.

Norfolk Two sites: (1) three singing males, and one carrying food on 7th July; (2) pair, including singing male, in August, but breeding not confirmed.

Stafford One site: one singing male from 6th June to 5th July.

Suffolk Two sites: (1) at Minsmere, one pair possibly bred and two males singing in May and June; (2) two singing males in June and July, and one juvenile trapped on 11th August indicating successful breeding.

Warwick One site: one pair probably breeding and a second singing male.

County A One site: two males singing, from 10th May to 24th June and 17th-26th May.

An encouraging year, suggesting continuing consolidation by this species in England.



N.A.

Marsh Warbler *Acrocephalus palustris*

Seven sites: 2-71 pairs breeding.

Gloucester Two sites: (1) one pair bred; (2) one singing male from 28th May to mid June.

Isle of Wight One site: at least three singing males on 13th June; on 21st June, behaviour of one pair suggested presence of nearby nest. There had been only four previous records for the Isle of Wight, and no suspicion of breeding.

Kent One site: up to three singing males from mid May to mid June, at least one and perhaps two were paired.

Warwick One site: one pair possibly bred.

Worcester Two sites: (1) total of 50-60 pairs estimated, based on count of 46 singing males; (2) one singing male 16th to 19th June.

County A One site: one pair reared single brood.

Some evidence of a slight improvement in status compared with previous years, but in the main area the regular counter has commented: 'We are worried by undue disturbance and exploration by birdwatchers, including trespass. Their activities could be the most serious threat to the species.'

Dartford Warbler *Sylvia undata*

While this species remains at a high level, accurate counts are impossible.

Devon Several sites: population estimated at 30-40 pairs, but at least six pairs burnt out by heath fires.

Dorset At least 50 pairs present in many sites. 'In spite of the terrible heath fires in 1976, the species seems to have colonised unburnt heathland remarkably successfully. High numbers reported in autumn, indicative of a good season.'

Hampshire Seven sites: (1) New Forest population was estimated to be at least 200 pairs, but no detailed data available; (2) six pairs proved breeding and a further six singing males; (3) two broods and a third singing male; (4) one pair with young; (5) two pairs with young; (6) one male carrying food for young; (7) one pair with one young.

Isle of Wight Two sites: (1) present April-June, pair with two fledged young on 21st May, pair with one fledged young on 3rd June, considered different; (2) adult in May and October, juvenile on 14th September.

Surrey Four sites, with breeding proved at two: (1) four or five pairs; (2) six or seven pairs; (3) five pairs, but only one produced young; (4) one pair reared two young. 'Position greatly strengthened in the county despite loss of habitat.'

County A Five sites: (1)-(5) totals in March-April of at least seven, six, two, one and one pairs, sites not checked subsequently.

1976 County A Four sites: (1) two pairs, one pair seen carrying food; (2) one pair reared two broods; (3) eight singing males in April, three pairs feeding young in August; (4) one pair in May-June.

The total population for the country cannot be accurately assessed on the basis of the data submitted, but was almost certainly over 300 pairs and possibly over 400 pairs.

Firecrest *Regulus ignicapillus*

12 sites: 2-31 pairs breeding.

Berkshire Two sites: (1) one male singing on 3rd May; (2) one male singing on 4th July.

Buckingham One site: at least 14 singing males established in territories. This is a slight improvement on 11 in 1976, but greatly below the total of 46 singing males found in this site in 1975.

Cambridge One site: one singing male, March to July.

Devon One site: one pair from 5th April to at least 3rd May.

Gwent Three sites: (1) one pair built nest, but material systematically stolen by female Chaffinch *Fringilla coelebs*, none seen after 31st May; (2) singing male on 22nd June and 4th July, perhaps from site 1; (3) one on 31st May.

Hampshire Two sites: (1) one pair bred; (2) one singing male.

Kent One site: up to seven singing males May to June.

Nottingham One site: one singing male 25th June.

The population has remained at about the 1976 level and therefore much reduced from its peak in 1975. The annual totals of pairs breeding during 1973-77 have been 2-18, 0-33, 14-121, 4-27 and 2-32.

Golden Oriole *Oriolus oriolus*

14 sites: 5-19 or more pairs breeding.

Gwent Three sites: (1) male on 16th July; (2) male on 15th June; (3) male in June and July.

Kent Three sites: (1) singing male on 29th May; (2) singing male on 11th June; (3) one pair raised four young.

Suffolk Five sites: (1) at least six singing males, one nest found and at least three family parties located; (2) pair 30th-31st May and single bird 17th-25th June; (3) one on 17th June; (4) one in mid June; (5) one on 29th May.

County B Two sites: (1) singing male from 22nd May to 27th July; (2) singing male on 7th June.

County C One site: one pair fledged young.

The highest ever estimate of pairs breeding in the UK in 1976 was closely matched this year, even though there were no data from County A. The annual totals of pairs breeding during 1973-77 have been 1-8, 2-4, 2-7, 6-21 and 5-19.

Red-backed Shrike *Lanius collurio*

Reported from 11 counties: 47-63 pairs breeding.

Bedford One site: male on two occasions in mid June.

Essex One site: one pair in late June and early July.

Hampshire Three sites: (1) (2) single pairs each raised three young; (3) pair possibly bred.

Lincoln/South Humberside Six sites: (1) two pairs, one reared four young, other pair almost certainly reared two young, the first proved breeding since 1945; (2) one on 20th July; (3) one male from 31st May to 1st June; (4) one male on 20th May; (5) one from 25th May to 11th June; (6) female on 24th May, 11th June and 19th July, male on 2nd June.

Norfolk Eight sites: (1) three pairs, no young reared; (2) one pair, no young reared; (3) two pairs bred successfully; (4) one pair summered; (5) female on 7th June; (6) male from 10th June to 1st July, female on 11th July; (7) one pair bred; (8) two pairs, success not known.

Nottingham One site: one pair fledged three young from four eggs, the first breeding in the county since 1947.

Suffolk Minimum of 27 pairs in the coastal belt and three pairs in Breckland.

County A Two sites: (1) pair feeding one recently fledged young on 1st August; (2) pair, male displaying to female, 6th-10th June.

County B Four sites: (1) nest with two eggs on 26th June, deserted containing four eggs on 18th July; (2) male carrying food on 25th June; (3) male on 20th June, pair on 22nd June, site not revisited; (4) two, perhaps both males, on 8th and 15th June, site not revisited.

County C One site: one pair, courtship feeding on 18th June, feeding four young in nest on 13th July, last seen 19th July after nestlings killed by predator.

County D One site: pair courtship feeding.

It was a much better year than expected for this species, with breeding taking place for the first time since the 1940s in Lincolnshire and Nottinghamshire. Counties A, B, C and D are all in Scotland, where there were also nine other records of singles (eight males, one female) in late May to July in the Highlands, which brings new hope. There were records in more counties than in any year since 1973, and 1977 also had the highest maximum total.

**Brambling** *Fringilla montifringilla*

One site: summer records.

Caithness One site: singing male 11th May to 17th August, one female on 7th May, two females on 20th May.

This species has not appeared in our report before. The last singing male was also in Caithness, in 1972.

Lapland Bunting *Calcarius lapponicus*

Six sites: at least two females reared broods.

Scotland Six sites: (1) male and two females, each female reared four young, another female not far away on 14th July; (2) two pairs during 7th-14th July, one pair copulating; (3) two males and a female on various dates from 16th June to 6th August, possibly nested; (4) at least six males and one female on various dates from 31st May to 27th June; (5) one pair 3rd July; (6) two males and two presumed females 2nd June.

The arrival of Lapland Buntings on suitable breeding territory was unprecedented and led to the first proved breeding record of this species in the United Kingdom (*Brit. Birds* 72: 53-59). A cold, late spring with above-average snow cover on the mountains was probably an influence on this northern breeder. There is only one previous record of one in a suitable breeding area in the UK (*Brit. Birds* 71: 11-33).

Snow Bunting *Plectrophenax nivalis*

Five areas: 4-15 pairs breeding.

Scottish Highlands Four areas: (1) at least three to five males and two to four females, 'good breeding season'; (2) three to five males and five females, 'good breeding success'; (3) two pairs bred, three young seen; (4) two pairs apparently breeding and also a single female.

County B One site: at least two singing males and at least one agitated female in June-July; first time this century that breeding has been suspected.

1976 Grampian Further detail, but probable overlap with general comment already published. One site: 11, including four pairs, song-flights and chasing seen, 26th May.

Difficult to work out numbers actually breeding, but apparently a good breeding season (eggs and young seen) with numbers higher than usual, possibly influenced by heavier than usual snow cover in mountains.

Rare Breeding Birds Panel, Fountains, Park Lane, Blunham, Bedford MK44 3NJ

Obituary

Charles F. Tunncliffe, OBE (1901-1979)

From an early stage in my life, I have had two outstanding interests: drawing and birds. Naturally enough, when, during my school-days, my interest in birds developed, I tried to draw them as well as watch them. Although I studied the bird paintings of the old 'masters', I made little progress until one day, by good fortune, I happened to come across *My Country Book* by Charles Tunncliffe. It was not so much the fine engravings or the coloured portraits that attracted my attention as the simple reproductions at the back of the book, showing whole pages from his field sketch books. This series of his quick spontaneous sketches, catching the movement and vitality of birds in the wild, was one of the great inspirations of my life. I was completely fascinated by them. Thereafter, I tried to follow this approach and, while my drawing never came anywhere near Tunncliffe's standard, my pleasure in birdwatching and the standard of my recording and observations of bird behaviour benefited enormously.

Some years later, when discussing birds in art with the man who was to become my father-in-law, Reg Wagstaffe, I happened to mention my admiration for Tunncliffe's work. To my great surprise and delight, he asked if I would like to meet Tunncliffe. He told me how they had been close friends since the time when, as a young man, Charles had come into the Stockport museum where Reg was the curator to borrow the skin of a



203. Charles F. Tunnicliffe (1901-1979) (*Ackroyd Photographers*)

Lesser Golden Plover. Charles wanted to study its plumage in detail. I of course responded enthusiastically and the following weekend we drove to Shorelands, the Tunnicliffes' cottage in Anglesey.

Charles the man was every bit as stimulating and exciting as his paintings. He was large in stature, full of fun and had tremendous enthusiasm for his art. He worked regular hours, dividing his time between studio work on major paintings and sketching from life in the field. From time to time, his portrait work was interrupted when someone arrived with a dead bird of which he would make a painstaking life-size study to form his reference material (his recent one-man exhibition in the Royal Academy of these studies attracted enormous attention).

Although his own paintings were essentially realistic in their presentation of birds, his interest and appreciation of birds in art (and indeed of art in all its aspects) was extremely broad. He particularly appreciated Chinese bird studies and, at a time when there was much criticism of 'moderns' like Picasso, and Matisse, he would vigorously defend their approach and style. He tackled his work like a craftsman and felt strongly that art was something that should be enjoyed by everyone. For this reason, at a later stage in his career, he concentrated on medium-sized watercolours which, as he explained to me, could be reasonably priced and would fit into the standard sitting room of the modern house.

He died at the age of 78. The first 19 years of his life were spent on his father's farm, and he always said that this early contact with animals gave him an insight into their form and anatomy which was later to prove invaluable to him in his painting.

He received his training at Macclesfield, Manchester and the Royal College of Art. It was not, however, until he saw a copy of *Tarka the Otter* in 1930 that his career as a wildlife artist really began. He was so impressed with the book that he sent four unsolicited illustrations to the publishers, who responded by saying that if he could produce wood engravings they would use them. For many years, engraving was his favourite medium, but he eventually felt that it imposed too great a strain on his eyes. After working briefly in London, he returned to Cheshire and then, in 1947, moved to Anglesey, where he was to spend the rest of his life.

It was a cause for great satisfaction to his friends and admirers that he received public recognition during his lifetime. He was elected ARA in 1944, and in 1954 became a full Royal Academician: the only contemporary wildlife artist to receive this honour. The same year, he was elected Vice-President of the RSPB and in 1975 the Society awarded him its Gold Medal in recognition of his services to bird protection.

His long artistic association with the RSPB began in 1950, when he produced a delicate study of Redwings for a Christmas card. From then on, the Society regularly used his work, and for the whole of the 12-year period between 1954 and 1966 he painted every cover picture for the bi-monthly *Bird Notes*. In recent years, his paintings have continued to appear on covers, and his prints remain popular. In addition, he wrote and illustrated several books himself, including *Mereside Chronicle* and *Shoreland Summer Diary*, and illustrated many more. His etchings and engravings for all these publications were as effective and technically excellent as his paintings.

In placing a true value on the work of any artist, it is always revealing to see how he is regarded by colleagues. When he was awarded the RSPB Gold Medal in 1975, the following were among comments made:

'All of us who have ever tried to portray wild creatures recognise the unique quality of Charles Tunnicliffe's vision and imagination. His style, his inherent respect for nature and his artistic integrity have given pleasure to an enormous number of people and have greatly inspired and influenced his fellow artists.' (Sir Peter Scott)

'A colourful, apt and factual commentary upon wildlife in all its forms as the seasons passed and the mass of his drawings grew—birds, beasts, berries, flowers, unfolding leaves, lichenised stones and frosted grass, every detail clear and true.' (Eric Ennion)

'Tunnicliffe is surely the best, by far, of the living painters of natural history subjects. He is a flawless draughtsman. His birds and animals are solid, round and shapely; beautifully observed and unmistakable, however slight the sketch, and correct in perspective and scale.' (Noel Cusa)

'I admire all his work that captures a sense of encounter with wild creatures and conveys the uniqueness and unpredictability of such moments.' (John Busby)

Charles was particularly fortunate in having the company and encouragement of his wife Winifred. She was an artist in her own right and the deep interest they shared in birds and art strengthened their relationship. Her death in 1969 was a great blow. Despite this loss and then the gradual deterioration of his own health, he continued painting until shortly before his death. His final professional recognition came in the New Year Honours this year, when he was created an OBE.

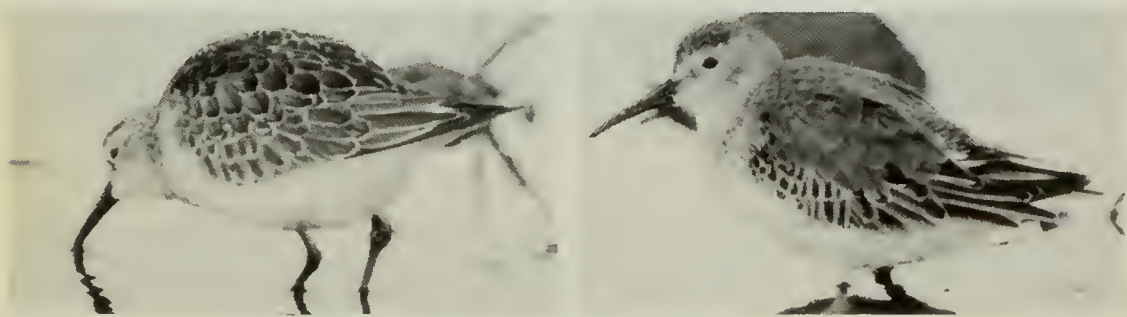
His death will leave a large void. Few artists possess the skill to produce work of the scope and standard he achieved, for, in addition to his enormous

range of bird paintings, he was equally skilful at portraying animals of every kind, from farm animals to fish, badgers, cats and monkeys. An artist is fortunate—and so also is the world—in that his work lives on for future generations to enjoy. His close admirers and students will be particularly pleased to learn that his fine series of measured drawings of dead birds and his numerous field sketch books are to be preserved at the Royal Academy, and also that plans are well advanced for two books. The first, *A Sketchbook of Birds*, will contain a large selection of raw drawings from the field sketch books and the second, *Life and Art*, will present a wider selection of his work.

What regrettably cannot be preserved is the warm and fruitful relationship so many people enjoyed with this gifted and friendly man; but the world is fortunate to have been able to benefit from his unequalled talents for so many years.

IAN PRESTT

Mystery photographs



32 Curlew Sandpiper *Calidris ferruginea*? Or Dunlin *C. alpina*? Both! We apologise for playing a dirty trick on our readers, but last month's mystery photographs (plates 172 and 173) were in fact two different species.

Clearly, the pictures are of two different individuals, as one has neatly pale-fringed feathers over the whole upperparts while the other has a much plainer mantle. Equally clearly, both are autumn juveniles; the pale, slightly-worn fringes to the coverts and tertials would proclaim this across a hundred metres of mudflat.

The first bird is concealing both its leg-length and the tip of its bill, but legs and bill both appear long. The colour of the uppertail-coverts and lower rump area is also not clear (but is that a white patch showing between the parted tertials?). Perhaps the best clues to its identity are the pale-fringes to the feathers of the upperparts, forming a striking scaly pattern, and the bird's obvious bulk. At this angle the body appears dumpy, almost bulbous, whereas the long wings (extending beyond the tail) and the longish neck of the Curlew Sandpiper invariably give it a rather slender appearance in the field. Like most migratory waders it will not start its post-juvenile head- and body-moult to first-winter plumage until it reaches or nears the wintering areas. Curlew Sandpiper shares a striking scaly juvenile plumage with only Buff-breasted Sandpiper among similarly sized waders, but the latter species is easily eliminated, since the bird in the photograph has dark legs, longish bill, supercilium and unspotted breast.



204. Mystery photograph 33. Identify the species. Answer next month

Juvenile Ruff *Philomachus pugnax* also has a striking scaly pattern, but at least its larger size (about that of a Redshank *Tringa totanus*) and its shorter bill should be obvious.

The identity of the second bird is evident from its medium-length or longish bill, which is distinctly kinked downwards towards the tip. It has to be a Dunlin! To me, this species has a great deal of 'jizz' about it; perhaps the hunched shoulders are the main contributor to this. The post-juvenile head- and body-moult to first-winter plumage is well advanced. No trace remains of the juvenile's characteristic blackish spotting on the lower breast and flanks, or of the richly-edged and fringed mantle, but a few juvenile feathers are retained around the edges of the scapulars and none of the coverts or tertials has yet been moulted.

The separation of these two species is, however, not always so easy as in the case of this pair of photographs. Winter-plumaged Curlew Sandpipers are very rarely observed here, but the pattern of the upperpart feathers (grey-brown with a darker shaft-streak and a fine whitish fringe when fresh) is identical to that of the Dunlin. Bill-lengths of Eurasian Dunlins are rarely as long as those of Curlew Sandpipers, but some populations of American Dunlins are *longer-billed* on average than Curlew Sandpipers. The slightly larger size, longer legs, white rump-patch and more elegant general appearance of the Curlew Sandpiper should, however, be evident in all plumages.

These birds were photographed by Dennis Green in Clwyd in October 1973.

JOHN MARCHANT

Notes

Great Crested Grebes breeding on rivers R. E. Youngman (*Brit. Birds* 70: 544-545) reported Great Crested Grebes *Podiceps cristatus* breeding on the River Ouse in Buckinghamshire, and documented recent increases in numbers on the River Thames below Henley. Records in the files of the Cambridge Bird Club indicate that the species has bred regularly on the lower reaches of the River Ouse for at least 20 years. The 1975 Great Crested Grebe census revealed a considerable increase in the number on rivers in Cambridgeshire.



Great Crested Grebes were first recorded nesting on the Cambridgeshire section of the River Ouse in 1951, near Over on the edge of the fens. They had previously been noted in this area during the breeding season. No nesting reports are on file for 1952-59, and only seven for 1960-73, but P. M. Warrington (*in litt.*) observed nesting and successful breeding almost every year between 1955 and 1973. All records refer to only one pair, frequently at a traditional site, but an additional pair summered in 1968. As on the Thames, the species appears to have become used to disturbance, and the absence of breeding records during 1973-75 is probably due to lack of visits to the area (P. M. Warrington *in litt.*). Within the Fens proper, the Ouse divides into two arms; successful breeding has been reported from both. On the Great Ouse between Ely and Brandon Creek (about 13 km), nesting by one pair was first noted in 1968. Subsequent numbers of pairs reported were: 1971, one; 1972, two; 1973, eight; 1975, eight. Not all pairs bred (in 1973 only five of the eight did so). This stretch of river, in contrast to the Thames, has few trees which could provide nest sites. Records from the Ouse Washes, which would refer mainly to the Old and New Bedford Rivers, suggest that nesting may have occurred there in 1960 and 1963, but the first definite report was of two pairs in 1964. Subsequent numbers of pairs, again not all breeding, were: 1966, three; 1968, one; 1969, two or more; 1970, five; 1971, eleven; 1972, three; 1975, five. The marked fluctuations from year to year may be correlated with the amount of spring flooding.

The 1975 survey produced the first records of the species nesting on the River Little Ouse (four pairs), the River Lark (two pairs), and on the Twenty and Sixteen Foot Drains (one pair each). The 21 pairs reported from rivers and drainage channels accounted for almost half the total of 48 pairs found within the county of Cambridgeshire. This is markedly higher than the 7.8% of the population breeding on rivers in neighbouring Lincolnshire, reported by R. B. Wilkinson (*Trans. Lincolnshire Nat. Union* 19: 22-25), and emphasises the importance of this habitat to Great Crested Grebes in certain areas.

H. JOHN HARVEY

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Flight characters of Wilson's Petrel: important correction As noted twice in the text (pages 333 and 334), plate 182 portrays a Storm Petrel *Hydrobates pelagicus* and not a Wilson's Petrel *Oceanites oceanicus*. The caption to plate 181 was accidentally repeated by the printers and substituted for the correct caption to plate 182, which should have read:

182. Storm Petrel *Hydrobates pelagicus*, Co. Kerry, August 1973 (*Jeffery Boswall*)

We apologise to the author, Jeffery Boswall, and to our readers for this serious error. EDS

Turnstones in near-complete summer plumage in January On 13th January 1978, at Heysham Head, Morecambe Bay, Lancashire, I saw a Turnstone *Arenaria interpres* in complete or near-complete summer plumage; it was with 30 others, all of which were in winter plumage, feeding in a field

at high tide. The next time I saw one with any sign of summer plumage was six weeks later, when two had one or two chestnut feathers among their scapulars and wing-coverts.

LAURENCE N. ROSE

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We asked Dr C. D. T. Minton to comment and he has replied from Australia as follows: 'I have occasionally seen or caught several different species of wader in partial or complete summer plumage in winter, probably the most frequent being Knots *Calidris canutus*. In some cases, this has been an old, worn, non-moulted plumage and often, in such cases, the bird showed signs of an old injury (usually to a leg or its bill) which has clearly affected the moulting cycle. On other occasions, particularly red breast feathers of Knots in January, the aberrant summer plumage appeared to be new: assumed in autumn in place of the winter plumage or moulted into during the winter much earlier than the normal spring moult. I do not know the reason for this aberrant behaviour, although the late Dr Jeffery Harrison shot some such birds in Kent about 20 years ago and attributed it to irradiation on their Siberian breeding grounds. We have had a Red-necked Stint *C. ruficollis* here from November to February in full (fresh) breeding plumage (which tempted everyone to identify it as a Little Stint), in contrast to its 20,000 companions which were all in 'winter' plumage. It is quite normal for the chestnut scapulars to be present at the end of February or early March as the first of the adult Turnstones start the change to summer plumage at about that time, although the moult is often not until late April or even later.' EDS

Call of Booted Warbler Being aware of the interest in the field identification of Booted Warbler *Hippolais caligata* (e.g. *Brit. Birds* 71: 132, 546; 72: 82), I took the opportunity, when in India for four weeks in January/February 1979, to observe this species critically. All of the 30-40 Booted Warblers which I saw were feeding in the tree canopy and uttered a constant 'tick-tick-tick-tick' call with an interval of half to one second between each 'tick'. I discussed this with S. A. Hussain, a co-worker with Dr Salim Ali in Bombay, and he considered the note to be an absolute guide to identifying Booted Warblers.

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Great Grey Shrike singing at Short-eared Owl in winter On 3rd February 1978, at Loch of Kinnordy, Angus, I heard an unmelodious sound from a bird, but could see nothing. Walking towards the sound, I suddenly spotted a Short-eared Owl *Asio flammeus* perched on a 1-m high stump about 250 m away on the frozen, snow-covered marsh. I then noticed a Great Grey Shrike *Lanius excubitor* in a partly obscured position on a willow *Salix*, about 5 m from the owl. Through my telescope, I saw the shrike facing the owl and uttering a continuous sound, best described as a discordant mixture of jingling notes, squeaky notes and a variety of scolding 'churrs' and 'chacks'; it much reminded me of the song of an Icterine Warbler *Hippolais icterina*. After a further five minutes of continuous song, the shrike suddenly flew at the owl, passing within a few centimetres of its head, alighted on another nearby bush and resumed singing. A few minutes later, it made a second pass at the owl and returned to the first bush. After about 20 minutes, the owl suddenly flew off across the loch, and the shrike immediately became silent.

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Identification of Little and Reed Buntings This note is prompted by the fact that most descriptions of claimed Little Buntings *Emberiza pusilla*

submitted to the Rarities Committee have totally omitted any mention of the most important field character. In his paper on distinguishing Little and Reed Buntings *E. schoeniclus* (*Brit. Birds* 69: 465-473), D. I. M. Wallace discussed the problem of identification in great detail, including such subtleties as folded wing shape, leg length and flight silhouette. He noted that 'only the following are foolproof: eye-ring, forecheek pattern and lesser wing-coverts'. The colour of the lesser wing-coverts was listed in a table ('Indistinct, dull brown and not contrasting with rest of upperparts') as differing from those of Reed Bunting ('Very distinct, bright chestnut or bay, forming most colourful mark in many females and immatures'), but was not given the prominence it deserves.

If confronted with a small bunting suspected of being a Little, the observer need look no farther than the lesser wing-coverts to confirm his opinion. If these are undoubtedly dull olive-brown and lack any hint of chestnut, Reed is eliminated; further reference to other plumage characters, most importantly the head, and to behaviour will clinch the identification. The lesser coverts may sometimes be concealed by fluffed-up breast feathers or the scapulars, but, if visible, the colour of them is diagnostic.

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Fifty years ago . . .

Title of letter: 'WHY KILL LITTLE BITTERNS?'

Generous review: '... a number of coloured plates, in which the birds are badly drawn and coarsely coloured, and mostly inaccurate in detail, but usually recognizable. . . . It is much hoped that with this excellent work . . . ornithologists will rise up and forge ahead in the future.' (*Brit. Birds* 23: 70, 72, August 1929)

Letters

Honey Buzzard at wasps' nest I was fascinated by F. K. Cobb's article describing a Honey Buzzard *Pernis apivorus* feeding at a wasps' nest (*Brit. Birds* 72: 59-64). His account was, however, incomplete in one important respect: he did not tell us *how* the bird dug out the nest. Did it use its talons or its bill? If it varied its attack by using a combination of both, which method was preferred and under what circumstances? D. S. GAUNT

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F. K. Cobb has replied as follows: 'I regret not mentioning that digging was mainly, perhaps entirely, by the feet, as noted in the literature. P. J. S. Olney (*in litt.*) has, however, pointed out that there is still the opportunity for useful observation on this subject, since *The Handbook* (vol. 3, page 96) notes that excavation is with the feet 'used alternately with great regularity, but apparently with some assistance from bill', but Ib Trap-Lind (*Brit. Birds* 55: 36) noted that his Danish individual did all its digging with its right foot. I had the impression that my Norfolk individual used its bill only for the removal of impediments such as roots.' EDS

Feeding actions of Golden and Lesser Golden Plovers May I refer Bernard King (*Brit. Birds* 72: 78-79) to an account of the feeding behaviour

of the Golden Plover *Pluvialis apricaria* which I gave in *Feeding and the Feeding Apparatus in Waders* (1974). On page 4, I described a vigorous feeding technique, termed 'snatching', which recalls the action of Lesser Golden Plovers *P. dominica* noted by Bernard King. I also gave some detail on earthworm extraction techniques which resemble those of the Lesser Golden Plover noted by D. I. M. Wallace. I have in fact watched the latter species at some length foraging on airports and playing fields in Sarawak, but individuals fed entirely by means of surface pecks; probably, the ground there was too hard to permit much excavation. I would suggest that both species have a similar repertoire of feeding techniques, including both surface pecks and forceful excavation, used as appropriate for various prey. The most significant point emerging from Bernard King's note is that the two species, when feeding together, were clearly seeking different prey. It would have been interesting to watch either species feeding in the same place, but unaccompanied by its relative, to see if the same feeding techniques were still used.

PHILIP BURTON

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Variations in Herring Gulls R. A. Hume's paper (*Brit. Birds* 71: 338-345) prompts several points concerning the identification and geographical races of Herring Gulls *Larus argentatus* wintering in Britain. During a survey of gulls breeding on the Norwegian coast (57-69°N), I saw no individuals with a mantle darker than pale grey; the colours observed by eye were comparable with those of British Herring Gulls (Morley *et al.* 1978). The cline in mantle colour reported by Barth (1966) was determined using reflective values, and an examination of skins in Oslo Museum showed that differences could be observed by eye in only a few cases. Herring Gulls breeding in Varanger Fjord (69°N 29°E) had 'thayeri'-type primary patterns but pale grey mantles. Those sampled at Varanger in late July had a mean moult score of 22 (a study of specimens in Oslo Museum showed that Norwegian individuals begin moult in May and June). The progression of moult through June and July suggested that primary moult would probably be complete by mid October (Morley *et al.* 1978).

Barth (1967) reported a continuous cline in Herring Gull measurements from north to south. The differences between mean values are significant, but there is considerable variation. Further, it is difficult to distinguish between Scottish and Norwegian gulls using biometric data, even when sex is determined. Table 1 illustrates the close similarity between male Herring Gulls in Scotland and south Norway; sizes of males in Scotland and females in north Norway are similarly close.

I feel that it is virtually impossible to distinguish between *L. a. argentatus* and *L. a. argenteus* in the field. One must also conclude that the very large dark Herring Gulls observed by Mr Hume are probably not of Norwegian origin; they may be Siberian, either *heuglini* or *vegae*, but the field descriptions are insufficient to establish this. Finally, it is possible that the 'yellow-legged' gulls were *argentatus* × *fuscus* hybrids: the published description closely resembles the morphological characteristics of known such hybrids (Harris *et al.* 1978). While hybrids are rare, many have resulted from

Table 1. Comparison of wing and bill measurements of Scottish and Norwegian Herring Gulls *Larus argentatus* (in mm; means \pm 2 standard errors)

Locality	Sex	Sample size	Wing length	Bill length	Bill depth
St Fergus, Aberdeenshire	Males	19	440.0 \pm 4.2	56.6 \pm 0.9	19.5 \pm 0.2
S. Norway 58°N	Males	25	446.0 \pm 4.2	57.1 \pm 1.8	18.6 \pm 0.1
Varanger Fjord 69°N	Males	24	462.0 \pm 3.2	60.1 \pm 2.0	20.8 \pm 0.3
St Fergus	Females	15	419.0 \pm 5.0	51.7 \pm 1.0	16.9 \pm 0.3
S. Norway 58°N	Females	37	427.2 \pm 2.0	54.4 \pm 0.7	18.4 \pm 0.2
Varanger Fjord 69°N	Females	21	438.9 \pm 5.4	54.2 \pm 1.7	18.9 \pm 0.6

interspecies cross-fostering experiments on Walney, Cumbria, and Skokholm, Dyfed (Harris 1970).

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HARRIS, M. P. 1970. Abnormal migration and hybridisation of *Larus argentatus* and *L. fuscus* after interspecies cross-fostering experiments. *Ibis* 112: 448-498.
—, MORLEY, C., & GREEN, G. H. 1978. Hybridisation of Herring and Lesser Black-backed Gull in Britain. *Bird Study* 25: 161-166.
MORLEY, C., GRIST, N. C., & MALLEY, J. A. 1978. *University of Nottingham Expedition to Norway Report*. Nottingham.

Mr Hume included considerable detail in his descriptions of four types of Herring Gulls. He attributed each type to *L. argentatus*, but did not publish their eye-ring colours. In at least two important studies of this group of gulls (Smith 1966, Harris 1970), eye-ring colour has been shown to be a crucial species-isolating mechanism. This must be observed and recorded along with the other details of the gulls' appearance if we are to understand subspecific variations. Mr Hume's study makes it even clearer that this anchor for field identification is essential; presumably, he was unable to determine the eye-ring colours of the gulls in the Midlands on sufficient occasions.

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Barth's (1966) reflective values referred to by Miss Morley were converted into the Munsell Colour System notation, with the following means: mantle colour for British Herring Gulls, 6.00; the darkest ones in north Norway are 4.5, and the lightest British Lesser Black-backs 4.1-4.7. I find it difficult to

believe that the recorded variation in Herring Gulls is not distinguishable by eye if the darkest northern ones are as dark as pale Lesser Black-backs.

I did point out that there is a rough gradation in size, the darkest not necessarily being the largest, and said that type B *in general* are large and dark. Perhaps small, paler Scandinavian individuals—closely similar to British Herrings—are included in type A, but surely none of the latter is included in type B. Barth clearly thought 'long bills, long wings, tails and total lengths' typical for north Norway, whereas 'small bills and short wings' are typical British.

Miss Morley's samples (table 1) demonstrate the difficulty of interpretation. Some of her figures agree with Barth's assertions, others do not. Barth also stated, however, 'with sufficiently large samples weight should be the best criterion of body size.' Gulls with similar wing lengths may look different sizes in the field. The bulk of the evidence is that Fenno-Scandian gulls are large, dark, often pink-legged, large-billed and have little black on the wing-tips.

I do not think that type B gulls fit *heuglini*, nor that my descriptions were insufficient to exclude this race: pink legs, reduced amount of black on the primaries and, probably, dusky heads rule out *heuglini* as well, I believe, as many *vegae*. Nor do I accept that the yellow-legged gulls at Cannock may be hybrids: in the field, their such clear-cut characters—including the brilliance of the yellow legs and the white head—are inconsistent with that view. Miss Morley has not taken into account the varying wing patterns (except for *thayeri*), nor the year-round white head of the yellow-legged gulls.

Turning to eye-ring colour: in some species at least this may fade in winter. Nevertheless, I have found dead Lesser and Greater Black-backs *L. marinus* in winter still with bright red (albeit very thin) eye rings, and Herrings with pure yellow ones. Even so, this is an exceptionally difficult feature to detect in the field in winter. With Herring Gulls, I could often see the pale iris and a thin dark outer ring, but not the fleshy eye-ring (yellow in summer). I suspect that the yellow-legged gulls had red rings: they showed a thicker dark outer ring than others, but this may not have involved the fleshy ring. All this is of doubtful significance, anyway, since Smith showed that iris and eye-ring colour can vary within some species, and Barth has shown, as I mentioned in my paper, that eye-rings of Herring Gulls in Scandinavia vary from yellow to red. Observations at Cannock would *prove* nothing beyond individual variation.

Eye-ring colour may be a species-isolating mechanism, but it can also vary intraspecifically so long as it does not become the same as that of similar gull species breeding nearby. I do not know if Scandinavian Herrings pair with gulls of similar eye-ring colour. If yellow paired with red, this would partly refute Smith's findings; if a gull paired only with one of similar eye-ring colour, an exceptionally complex situation would develop. Western *L. occidentalis* and Glaucous-winged Gulls *L. glaucescens* have different eye colours, mantle colours and wing-tip patterns, but hybridise readily, so the presumed isolating mechanisms are clearly not working (Hoffman *et al.* 1978, *Auk* 95: 441-458).

Of the yellow-legged Herring Gulls at Cannock, the head colour and wing pattern, combined with leg colour, must still provide the strongest evidence that these gulls are not Scandinavian in origin. R. A. HUME

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Road mortality of Swifts Further to my note on deaths of Swifts *Apus apus* along the A5 north of Dunstable, Bedfordshire (*Brit. Birds* 69: 63), the summer of 1977 on many occasions provided similar conditions to those described: drizzling rain and dampness. On each occasion, Swifts flew low over the road and mortality occurred. The maximum dead recorded at any one time was 18. It would appear that a certain combination of conditions always produces mortality to a varying degree. B. D. HARDING

100 St Laurence Avenue, Brundall, Norfolk NR13 5QN

Bernard King also wrote to us on the subject of Swifts flying at low altitudes, as follows: 'During the past six years, habitually in the late evening, at Alexander and Morrab Roads, Penzance, Cornwall, I have noted Swifts flying at vehicle- and pedestrian-level during normal pre-dusk feeding. I have seen two or three maimed or dead, and thought this to have been caused by moving vehicles. There seem to be two categories of low-level flying: firstly, when large screaming parties gather in the later evening, and at one moment are at a considerable height and as quickly at vehicle-level; secondly, when large numbers of insects descend near to the ground in the late evening, and Swifts seek them along the roads at low level. Low-level flying is not uncommon and may lead to 'normal' mortality, but the instances described by B. D. Harding seem to have been exceptional.' EDS

Birds and insect swarms L. J. Davenport (*Brit. Birds* 71: 366) suggested that small insectivorous birds might be deterred from flying near to the apparent vortices of insect swarms which resemble twirling plumes of smoke. This is in contradiction to other observers, who have recorded hirundines smoke-bathing on many occasions. I should like, therefore, to suggest a less paralogical reason for birds avoiding these dense swarms. If they were to fly through them, birds would have their eyes filled and their head, face and all their leading edges covered with sticky chitinous remains, which would necessitate much subsequent preening. Apart from losing considerable aerodynamic lift, they would be flying blind and in considerable discomfort; I should think that one such experience would be enough. A human being can simulate the experience by riding a bicycle fast through a cloud of gnats while keeping his eyes open. Such an experience may cause one to reflect on the efficacy of a nictitating membrane in such circumstances and whether hirundines (and other species which eat flying insects) would attempt to choose more—or less—densely occupied feeding spaces. G. H. FORSTER

Charlton, Searle Road, Farnham, Surrey

Singed flycatcher On the morning of 21st August 1977, at Red Rocks, Hoylake, Merseyside, I trapped an adult Spotted Flycatcher *Muscicapa striata* which had clearly been singed by fire. The tips of its primaries, secondaries and tail were curled and fused together, in the manner of thin strips of plastic subjected to intense heat; the feathers of the head and back showed burnt whitish ends and severe twisting. The flycatcher flew and

behaved normally and, if it survived its handicapped migration, it would no doubt have renewed the damaged feathers in the next moult.

At the time, I dismissed this as a probable example of the reluctance of a parent to desert its young during a forest fire, possibly in Scotland or Scandinavia. In retrospect, another explanation may be more likely: that the bird was attracted to a gas flare (often more than 30 m high) over the North Sea while migrating in early autumn. A recent article in *Birds* (vol. 7, no. 5, pp. 24-25) suggests that this is quite common, with reports indicating huge losses of night migrants at some of these flares. Data from the companies concerned are not available, only eye-witness accounts. Perhaps other birds suffering from the effects of heat have been trapped or handled recently, especially on the east coast of Britain? DAVE WOODWARD

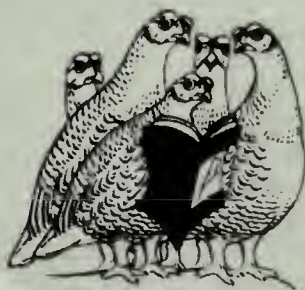
59 Sandringham Avenue, Hoylake, Merseyside

Status of Rufous-sided Towhee The BOU Records Committee has now completed its deliberations (see *Brit. Birds* 72: 291-293) and has retained Rufous-sided Towhee *Pipilo erythrophthalmus* in Category A of the British and Irish List on the basis of the adult female on Lundy, Devon, on 7th June 1966 (*Brit. Birds* 63: 147-149). The Spurn, Humberside, individual (*Brit. Birds* 70: 443, 449; 71: 527), however, is regarded as an escape from captivity. EDS

Announcement

Free car stickers Plastic car stickers with the design shown here are now available. Only 1,000 have been printed, so the first 1,000 subscribers sending a self-addressed and stamped envelope will receive one free. Write now, enclosing a SAE, to: 'British Birds' Car Sticker Free Offer, c/o Annabel Hartog, Macmillan Journals Ltd, 4 Little Essex Street, London WC2R 3LF.

We read
British Birds



Requests

Hen Harriers and owls During winter 1978/79, there were influxes of Hen Harriers *Circus cyaneus*, Short-eared *Asio flammeus* and Long-eared Owls *A. otus* in many coastal and inland counties. To ensure full coverage of these events for a paper in *British Birds*, observers are asked

to send all records, including such details as locations of roosts, counts of concentrations and directions of flight-lines, to J. N. Hollyer, 21 Temple Way, Worth, Deal, Kent.

Colour-ringed Ringed Plovers Loyalty to breeding areas is well known for many species; some (e.g. Black-headed Gull *Larus ridibundus*, Yellow Wagtail *Motacilla flava*, Reed Warbler *Acrocephalus scirpaceus*, Brambling *Fringilla montifringilla*) are also known to return to the same wintering areas. There is now ringing evidence of two Ringed Plovers *Charadrius hiaticula* which breed at Bessin in the German Democratic Republic regularly wintering at, respectively, La Haule in Jersey and Hayle in Cornwall. To extend knowledge of this habit, 133 adult and 335 nestling Ringed Plovers have been colour-ringed at Bessin, the adults with three colour rings in addition to the usual aluminium ring and the young plovers with one colour ring. Details of any sightings of these birds will be greatly appreciated; reports should be sent to Dr A. Siefke, Vogelwarte Hiddensee, DDR-2346 Kloster/Hidd.

Summary of winter 1977/78

Howard J. Milner

This summary looks at the status of our commoner wintering birds from November 1977 to March 1978. For records of rarer species, readers should turn to the relevant 'Recent reports' or 'Reports on rare birds in Britain'.

Divers and grebes

There was an uneven scattering of divers *Gavia* and a notable absence of grebes *Podiceps*. The bad weather in mid November and at the New Year caused two separate influxes on inland reservoirs. Derbyshire recorded all three common divers for the first time in its history, while three Great Northern Divers *G. immer* and two Black-throated Divers *G. arctica* spent most of the winter at Draycote Reservoir (Warwickshire). Heavy passages of these species were noted at St Ives (Cornwall) in mid November during the gales, going west, and on 28th March a record 504 divers moved east. Other heavy passages occurred at Filey Brigg (North Yorkshire) and Seaton Sluice (Northumberland), while 80 divers sheltered from the late January gales in the Dee Estuary, but most, it seems, gave up and left their winter haunts with the onset of the February bad weather. Large numbers of Red-throated Divers *G. stellata* wintered on the East Coast, with 753 off Aberdeenshire in January and reports of frequent sightings from elsewhere. A total of 550 Great Crested Grebes *P. cristatus* was counted in the London area after the January gales, five Black-necked Grebes *P. nigricollis* wintered

on a short stretch of the River Deben in Suffolk and ten Slavonians *P. auritus* were on Tyneside.

Other waterbirds

Records were scattered, with considerable variations on previous years' figures. Mallards *Anas platyrhynchos* reached 5,400 on the Ouse in late December, while Wigeons *A. penelope* retained last year's high levels, with 26,532 on the Ouse in February, and, in December, 6,800 on the Exe and 5,500 on the Medway. The Lindisfarne (Northumberland) total reached a peak of 20,000 in November. Teals *A. crecca* were down on last year, with 6,500 on the Mersey in November and a total of 3,000 on the Ouse and the Medway in the same month. Numbers of Pintails *A. acuta* rose dramatically in north-western England. There were 15,500 on the Ince marshes (Lancashire) on November 13th and high counts of 979 at the Burry Inlet (West Glamorgan) and 1,237 on the Ouse Washes (Cambridgeshire/Norfolk) in March. Ireland had its usual quota of the exotic, with a Blue-winged Teal *A. discors* and a notable concentration of sea-ducks in Co. Donegal: six Surf Scoters *Melanitta perspicillata*, 278 Velvet Scoters *M. fusca* and the 'resident' King Eider *Somateria spectabilis*. Sawbill numbers seemed average throughout Britain and Ireland, but of note was a record 93 Goosanders *Mergus merganser* at Eccup Reservoir (West Yorkshire) in December; a Smew *M. albellus* on Fair Isle (Shetland) on 6th April was only the tenth

record there of this species. There were good numbers of wintering Red-breasted Mergansers *M. serrator* on the East Anglian coast, while 13 Smews were recorded in London during the winter. Numbers of Shelducks *Tadorna tadorna* were down, save for 4,000 on the Mersey in December, which beat the previous year's record.

A total of 1,898 Bewick's Swans *Cygnus columbianus* was present on the Ouse Washes in December, along with 78 Whoopers *C. cygnus*, the winter peak. Of some 250 Whooper Swans in Aberdeenshire, 93.2% were adults, which suggests a very poor breeding season. Lightning killed 157 Pink-footed Geese *Anser brachyrhynchus* at Castle Acre (Norfolk) on 3rd January. The last time such an event was reported was on 8th February 1905 when a mixed flock of grey geese was similarly cut short; interestingly enough, also in north Norfolk. There was a very good grain harvest in Scotland in 1977, with a large barley spill which kept the geese farther north than has been the case in recent years. There were only 9,000 Pinkfeet on the Ribble in November and a 19,000 peak the following month. The greater proportion remained in Perthshire and Aberdeen. The total count for Greylags *A. anser* in the UK was 67,000, mostly in Ross & Cromarty, but with 4,000 at Carham (Northumberland) in November. Numbers in England, however, were generally well down on previous years, through the combined effect of a poor breeding season and plentiful food supplies in the north. Numbers of Brent Geese *Branta bernicla* were also well down, with a national total of 40,000, apparently the result of a disastrous breeding season in northern USSR. The peak count was 8,875 on 13th November at Foulness (Essex).

Raptors and owls

There were even fewer records of Rough-legged Buzzards *Buteo lagopus* than in 1976/77, with three in Suffolk, one in Grampian and one in early March in Shropshire. There were fewer harriers *Circus* than usual; for instance, only 12 Hen *C. cyaneus* and six Marsh *C. aeruginosus* in Suffolk. There were many records of Merlins *Falco columbarius*.

Waders and seabirds

The first indications of wader numbers present in the winter show that there were few real surprises. Perhaps the continued decrease in the counts of Knots *Calidris*

canutus is the most striking, since there were only 35,000 on the Wash, 9,100 on the Ribble and 2,800 at Lindisfarne; only the Humber, with 18,000, and Teesmouth, with 5,000, showed any real increase.

Several Siberian species, however, were present in good numbers, especially Grey Plovers *Pluvialis squatarola*, with over 1,000 on the Wash and more, unusually, on each of Langstone (Hampshire) and Chichester Harbours (West Sussex); these last two areas also had 64,000 Dunlins *C. alpina* between them. Bar-tailed Godwits *Limosa lapponica* remained well up, with 7,500 on the Wash and 5,200 on the Ribble. Icelandic Black-tailed Godwits *L. limosa* were on their usual estuaries, the main concentrations being 900 on Langstone Harbour and 880 on the Stour. Counts along the rocky coast between Fraserburgh (Grampian) and Roseheart (Grampian) revealed 510 Purple Sandpipers *C. maritima* and 950 Turnstones *Arenaria interpres*. Of the scarcer waders, Little Stints *C. minuta* were in evidence on Southampton Water (Hampshire) and at Langstone and Pagham Harbours (West Sussex), including at least six at the first locality. The trend for more Avocets *Recurvirostra avosetta* to winter on the English east coast continued, with 23 on Butley Creek (Suffolk); there were also 53 on the Tamar and 16 on the Exe. Of the coastal sites, only Pagham had large numbers of Ruffs *Philomachus pugnax* this year (200). A small but noticeable increase in numbers of Spotted Redshanks *Tringa erythropus* was observed, especially in February, when Lough Foyle (Co. Donegal/Co. Londonderry), the Burry Inlet and the Beaulieu River/Solent (Hampshire) had at least 45 between them, half of the total in the last area.

Gull numbers were down on last year, Ireland taking the lion's share of the arctic visitors. There were 12 Glaucous *Larus hyperboreus* and four Iceland Gulls *L. glaucoides* in Donegal Bay in January. Glaucous also turned up on Humberside (3), Fair Isle (5), Hoveringham (Nottinghamshire) (1), Chew Valley (Avon) (1), East Anglia (9), Kent (2) and Shetland (2). Sabine's Gulls *L. sabini* were recorded at North Shields (Tyne & Wear), Lowestoft (Suffolk) and Marazion Marsh (Cornwall).

Guillemots *Uria aalge* were back on the cliffs at Bempton (Humberside) in late November, while Seaton Sluice recorded the largest auk movements, with 4,000 moving north on 30th December and 1,000 south on



205. Snow Bunting *Plectrophenax nivalis*, Suffolk, February 1978 (Jeff Pick)

29th January. A total of 2,000 Puffins *Fratercula arctica* moved south off Filey Brigg on 22nd November and, at the same time, a heavy easterly auk passage was noted at Dungeness (Kent). There were scattered records of single Little Auks *Alle alle*, the only sizable group being ten off Co. Mayo on 3rd January. Small numbers of Razorbills *Alca torda* were seen off Fair Isle in January.

Passerines

In North Wales, a late influx of Black Redstarts *Phoenicurus ochruros* led to at least six overwintering; this species was also reported from Cape Clear Island (Co. Cork) on 23rd December. Numbers of Siskins *Carduelis spinus* and Redpolls *C. flammea* were up too, with high totals from Staffordshire, Suffolk, Warwickshire and Kent, but there

were fewer Bramblings *Fringilla montifringilla* than usual, with reported peaks of only 60 in Northumberland and 30 in Norfolk. Waxwings *Bombycilla garrulus* were scarce: Fair Isle had only one in the whole of 1977, while 31 appeared at Aberdeen (Grampian) on 17th January, and Great Grey Shrikes *Lanius excubitor* were spread very thinly.

Winter 1977/78, however, belonged to Snow Buntings *Plectrophenax nivalis* and Lapland Buntings *Calcarius lapponicus*. They were widely reported throughout, with Snow Buntings numbering 800 in Aberdeenshire, 100 in Co. Dublin and 30 on Tyneside.

Acknowledgements

I am grateful to M. A. Ogilvie for his assistance with the wildfowl numbers; to A. J. Prater for supplying the data on waders; and to Mrs S. D. Cobban for her work on my manuscript, including typing.

Howard J. Milner, 7 Vincent Square, London SW1

News and comment

Peter Conder and Mike Everett

Twenty-five years of the IWRB The XXVth Annual Board Meeting of the Inter-

national Waterfowl Research Bureau was held at the Slimbridge headquarters of the

Wildfowl Trust on 6th and 7th June 1979. In welcoming delegates and observers from 23 countries, Sir Peter Scott, CBE, gave a brief account of the history of the Bureau which had actually begun life in 1952 as the International Wildfowl Committee. After a short period, the name was changed to the International Wildfowl Research Institute and then to the International Waterfowl Research Bureau in 1954, with Dr E. Hindle as the first director and Miss Phyllis Barclay-Smith, CBE, as the first secretary. In 1962, Luc Hoffman was elected director and the Bureau moved to the Tour du Valat in the Camargue. In 1969, Professor G. V. T. Matthews was elected director and the Bureau moved to its present home at Slimbridge. It is pleasant to record that Professor Matthews was elected director unanimously for a further term. Part of the recent two-day meeting was to review the research undertaken by the 16 groups covering ducks, sea-ducks, geese, waders, coots, pelicans, swans, woodcocks and snipes, flamingos, ring-necked, wetland management, feeding ecology, hunting rationalisation, hunting-kill statistics, endangered waterfowl and, finally, hunter/conservationist relations. The post of chairman for this group is vacant, which is perhaps not surprising.

The Seabird Group Three months ago (*Brit. Birds* 72: 243), we wondered how the Seabird Group would fare after the loss of six stalwarts from its old executive. It is clear from the Group's latest newsletter (no. 25) that the delayed AGM which was held on 26th March 1979 overcame any problems and elected its six members without recourse to a vote. The new chairman is Chris Mead from the BTO; the secretary is Tim Birkhead, Zoology Department, University of Sheffield, Sheffield S10 2TN, and the bulletin editor is Tim Stowe of the RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

The newsletter is full of news of the group's activities, expeditions and projects, and, for those who like to keep in touch with disasters, there is a useful piece on oil pollution abroad, bringing news of oil pollution incidents during the first quarter of 1979. There are a number of requests for information, including one from Peter Hope Jones and Tim Stowe who particularly want corpses of beached auks of a known age to help overcome a lack of good information on

assigning ages to Guillemots and Razorbills: one of the essential facts to be determined in an oil spill.

Pheasant protection in the Himalayas Recent surveys carried out by Z. B. Mirza, one of Pakistan's foremost naturalists, has indicated that only in Azad Kashmir are pheasant populations generally stable. The World Pheasant Association, which was formed only four years ago, has become so concerned with the decline in populations of pheasants in various parts of the world that they have been financing research by a number of young British ornithologists (*Brit. Birds* 72: 141). A. J. Gaston has been working in the Kulu valley, assessing suitability of habitat and making management recommendations. It was hoped to finance other workers in Malaysia and Nepal. In November 1979, the WPA will be organising a Himalayan Symposium on mountain pheasants in Kathmandu, which will be followed by a pheasant trek from Lukla to the Thyangboche Monastery. The headquarters address of the WPA is Daws Hall, Lamarsh, Bures, Suffolk CO8 5EX.

Tourism and conservation We suppose that special-interest tours to view wildlife of many different countries benefit wildlife in at least two ways: first, the tourist develops an interest in the country and its wildlife and some day this interest may be given an opportunity to express itself actively on behalf of the animals and plants; secondly, the number of tourists wishing to see the wildlife may give the authorities concerned the notion that this sort of tourism can bring in foreign currency and that preserving wildlife is worthwhile for that reason, even if not for the sake of the animals themselves.

Very few of the package-tour operators, however, actually make a direct and practical contribution to the funds of the countries they visit. Two firms which do are Executive Travel (Sunbird Tours) and Town and Gown (Peregrine Tours). Executive says that it is the only company operating wildlife tours to include a fixed levy (1%) in the price of every holiday in order to help international wildlife conservation, which will go entirely to national conservation societies of the countries visited by their Sunbird Tours or to international agencies such as the World Wildlife Fund, the Fauna Preservation Society and the International Council for Bird Preservation.

Raymond Hodgkins has for years made a practice of persuading the clients of 'Town and Gown', of which he is the managing director, that they ought to pay at least a small contribution towards the conservation efforts of the country they are visiting. More recently, he has persuaded them to contribute to the production of a full-colour poster, now to be seen throughout Crete, Corfu and the Greek mainland, depicting birds which breed in Greece and which need protection. 'Town and Gown' and ICBP contributed to the cost, and John Gooders's photo agency 'Ardea' provided the photos free of cost. The original poster has now been adapted for use in Malta.

Taxing birdwatchers (USA) In Britain, we are lucky, or perhaps wildlife is lucky, with the Nature Conservancy Council which concerns itself with the protection and management and wise use of all wildlife in the United Kingdom. In contrast, in the USA, more than 97% of state and federal wildlife funds now go into programmes involving game species, including 'luxury' animals such as deer, trout and quails; the remaining 3% goes to non-game species, from song-birds to turtles. The reason is that the hunters and fishermen have demanded it and have been prepared to pay the licence fees and a special tax on hunting and fishing tackle. Last year, a bill which proposed a tax on various recreational items such as camping equipment and bird food to be earmarked for non-game wildlife programmes foundered in the House of Representatives on the objections particularly from the hikers. A new bill proposes an excise tax on bird seed, bird feeders and nest boxes. This tax is wholly supported by the National Audubon Society and other conservation bodies.

New president of the Wildfowl Trust On 24th May, at the AGM of the Wildfowl Trust at Slimbridge in Gloucestershire, HRH the Prince of Wales was elected president of the Trust in succession to HRH the Duke of Edinburgh. Prince Philip has been president of the Wildfowl Trust since May 1972 and was also president from 1960 to 1965.

Horace Alexander's ninetieth birthday The editorial board of *BB* sent H. G.

Alexander a card on his ninetieth birthday. He replied: "It was very nice of you to send me a card for my ninetieth birthday. Thank you. I suppose there are not many survivors who have taken *British Birds* from the first issue. But it was a surprise, and a very pleasant one, to get the greeting. You may be interested to know that I was able to celebrate my birthday by spending two weeks in southern Texas. Michael Rowntree came from England, and we were taken round all the best birdy places by his sister Tessa and her husband Jack Cadbury. We scored well over 200 species in the fortnight, of which 24 were 'lifers' to me. It was the first time I had been able to make use, on the spot, of Peterson's "Texas Field Guide", which he gave to my wife and myself the only time we stayed with him, in May 1960. We had the luck to witness an extraordinary "fall" of small migrants on the coast one afternoon, due to bad weather and a north wind; then we had the unusual luck to see quite a few Baird's Sandpipers at very close quarters—a bird that is not too often seen well in some numbers I think, especially in spring."

Bob Spencer . . . Euringer At the ringers' conference, Bob Spencer was given a silver-plated pair of ringing pliers to mark 25 years as the BTO's ringing officer (*Brit. Birds* 72: 135). When he joined the staff on 1st January 1954, ringers were marking some 100,000 birds a year; in contrast, 600,000 birds are now ringed each year and 12,000 recovered. Among other honorary appointments, Bob is the general secretary of the international committee for the co-ordination of European ringing schemes, known as 'Euring'. He says he is going to use his silver-plated pliers only for very rare birds.

Bird posters The first 18 subjects covered by 'Domino Poster Guides Publication' include *Small Birds* and *The Bird-table*. Folded, these measure 11 × 25 cm, opening out to 132 × 50 cm. Both are designed and written by Hermann Heinzel, with paintings by Philip Burton (*Small Birds*) and Terence Lambert (*The Bird-table*). Colourful and accurate, these posters are very suitable as presents for children. They are published by Fontana Books Ltd at 85p each. (Contributed by JTRS)

Recent reports

S. C. Madge and K. Allsopp

These are largely unchecked reports, not authenticated records

This report covers May, with some April and early June records; except where otherwise stated, all dates refer to May.

The cold northerly airstream continued into the first half of the month, with temperatures below normal. The first reasonable arrival of migrants was around 10th as we were influenced by anticyclonic conditions over the Continent; interesting records were made throughout the remainder of the month, with other arrivals centred around 12th-13th, 19th-21st and 26th to end of the month, although numbers of migrants were rather low in many parts of the country.

Seabirds

The fact that there is a good spring passage of **Pomarine Skuas** *Stercorarius pomarinus* off the Atlantic coast of Britain was highlighted again this spring; watchers at Slyne Head (Co. Galway) counted a total of 710 moving north between 11th and 25th, with a peak of 200 in nine hours on 17th. The high total of 22 **Long-tailed Skuas** *S. longicaudus* also passed this headland on 23rd, with another two on 24th. A total of 150 **Pomarine Skuas** was counted from Cape Clear Island (Co. Cork) earlier in the month and 30 were seen off Dungeness (Kent) on 7th. Single **Cory's Shearwaters** *Calonectris diomedea* were noted off Slyne Head on 16th and 23rd and off Portland Bill (Dorset) on 28th. Two rather nice goodies were a **Ross's Gull** *Rhodostethia rosea* at Mid Yell (Shetland) on 3rd and an adult **White-billed Diver** *Gavia adamsii* off Fair Isle (Shetland) on 5th.

The fine anticyclonic conditions over the weekend of 12th-13th produced an influx of **Black Terns** *Chlidonias niger* into the south and east of England in particular. There were 21 at gravel-pits near Retford (Nottinghamshire) on 12th, and 30 appeared along with two **White-winged Black Terns** *C. leucopterus* on Crowdy Reservoir (Cornwall) on 13th; there was none there on the following day, but another White-winged Black appeared on 15th and other singles were reported from Kenfig Pool

(West Glamorgan) on 13th, and at Slimbridge (Gloucester) on 18th. On 6th, a **Gull-billed Tern** *Gelochelidon nilotica* had been reported from Radipole (Dorset).

Waders

Some rather out of place **Little Ringed Plovers** *Charadrius dubius* were singles at Ballycotton (Co. Cork), only the third Irish record, at Allanton (Berwick) on 5th and on Fair Isle (Shetland) on 20th (only the third there too). There was a scattering of **Kentish Plovers** *C. alexandrinus* as far north as Teesmouth (Cleveland), inland at Drake-low (Derbyshire) and west to Dawlish Warren (Devon). **Temminck's Stints** *Calidris temminckii* were well distributed too, from 17th onwards, along the English east coast. We hear of a **Greater Sand Plover** *Charadrius leschenaultii* at Pagham Harbour (West Sussex) for one day in mid April: no doubt it was the bird reported there earlier in the year. Records of small parties of **Dotterels** *C. morinellus* were quite widespread, a lone **Killdeer** *C. vociferus* was seen on Barra (Western Isles) on 24th, and an equally lone and unusual sighting was of a **Stone-curlew** *Burhinus oedipnemos* on the Isles of Scilly earlier in the month. Two **Black-winged Stilts** *Himantopus himantopus* were seen at Blythburgh (Suffolk) on 13th and a breeding-plumaged **Long-billed Dowitcher** *Limnodromus scolopaceus* was watched displaying over Farlington Marshes (Hampshire) from 5th until at least 12th. Cley (Norfolk) was a good place to visit in mid month as there was a female **Wilson's Phalarope** *Phalaropus tricolor* from 16th to 18th and a **Red-necked Phalarope** *P. lobatus* from 12th to 19th. Over on the other side of the country, there was a **Broad-billed Sandpiper** *Limicola falcinellus* at Peterstone Wentbridge (Gwent) on 7th.

Herons and ducks

Little Egrets *Egretta garzetta* did appear, with singles at Gweek Creek (Cornwall) on 13th, Cley on 30th, Pennington (Hampshire) on 2nd June and on the Blyth Estuary (Suffolk) on 7th June. We hear that the



Cattle Egret *Bubulcus ibis* at Loch of Kinnordy (Angus), mentioned in the April summary, stayed for nine days. There was a scattering of records of **Purple Herons** *Ardea purpurea* from sites in East Anglia, and one turned up at Marazion Marsh (Cornwall) on 31st. **Little Bitterns** *Ixobrychus minutus* were located on Cape Clear Island in early May, near Stithians (Cornwall) on 12th and at Cley from 20th. **Spoonbills** *Platalea leucorodia* were scattered down the eastern half of the country and we hear that the **White Stork** *Ciconia ciconia* in Grampian in April turned out to be two and that another was seen at Golston (Strathclyde) on 30th and 31st. A **Black Stork** *C. nigra* was identified flying west off St Agnes (Isles of Scilly) on 25th and six sightings of single **Cranes** *Grus grus* were reported from the East Coast between Norfolk and Humberside during the last week of the month.

The lone female **Black Duck** *Anas rubripes* which seems to be resident on Tresco (Isles of Scilly) has again produced a brood of ducklings, three this time.

Raptors

More reports of single **Black Kites** *Milvus migrans* came in, from East Halton (Humberside) on 18th, Southwold (Suffolk) from 20th to 22nd and Feldbrigg (Norfolk) on 28th: just how many—or how few—individuals were involved in these sightings is anyone's guess. **Marsh Harriers** *Circus aeruginosus* were widely reported in England during the month: a good scattering of records and it looks like being a good breeding season for them this year. Records

of **Montagu's Harriers** *C. pygargus* were numerous too, with reports from the East Coast north to Yorkshire and over southern Britain west to Cornwall and Dyfed. Single **Honey Buzzards** *Pernis apivorus* reached Fetlar on 2nd June and Fair Isle at about the same time, when a **Rough-legged Buzzard** *Buteo lagopus* was also on Fair Isle. A wandering adult **Golden Eagle** *Aquila chrysaetos* at Lune Head Moss (Co. Durham) on 26th was almost certainly one of those from the Lake District. There was a rumour of a **Gyr Falcon** *Falco rusticolus* about Sandwich (Kent) during the month and one was seen on Fetlar (Shetland) on 18th and caught by hand on 19th, but it died on 22nd. Single **Red-footed Falcons** *F. vespertinus* were reported from Winterton (Norfolk) on 6th, Kelling (also Norfolk) from 16th to 20th and at Flamborough Head (Humberside) on 27th. There were two reports of male **Lesser Kestrels** *F. naumanni*, from Cape Clear Island earlier in the month and at Fairburn Ings (North Yorkshire) on 4th June.

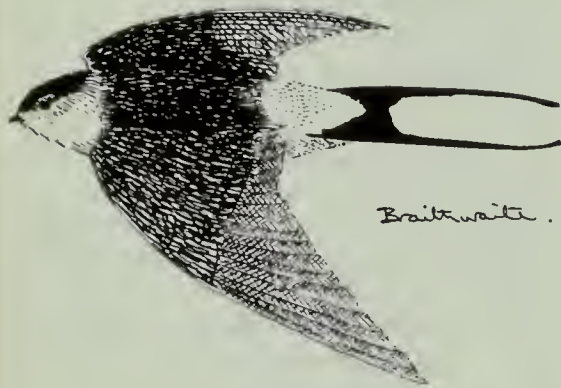
Smaller landbirds

Waves of arriving small migrants were especially notable through the latter half of the month, although there were no big numbers involved or large 'falls' on the coasts. On 21st, there was an arrival of migrants on Fair Isle which included seven **Bluethroats** *Luscinia svecica*, six **Red-backed Shrikes** *Lanius collurio* and two **Yellow Wagtails** *Motacilla flava* showing the characters of the race *thunbergi*; at the same time, there were two **Bluethroats** and up to nine **Red-backed Shrikes** on Fetlar.

A **Bee-eater** *Merops apiaster* was at Walberswick (Suffolk) on 16th and there was an interesting series of single **Alpine Swifts** *Apus melba*, on St Agnes on 9th,



Weybourne (Norfolk) on 13th, Minsmere (Suffolk) on 17th, Bampton Cliffs and Flamborough Head (Humberside) on 19th and at Fairburn Ings for 12 days from 21st; the last of these gave excellent views to the hundreds of people who came for it during its exceptionally prolonged stay: SCM even saw it from his garden! **Red-rumped Swallows** *Hirundo daurica* were noted from York (North Yorkshire) on 16th-17th, Spurn

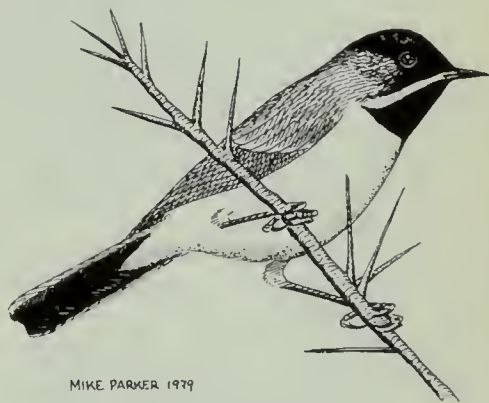


(Humberside) on 19th and Holme (Norfolk) on 3rd June. A bird showing characters of **Short-toed Treecreeper** *Certhia brachydactyla* was trapped at Portland Bill on 7th.

One of the features of this spring has been the good numbers of **Golden Orioles** *Oriolus oriolus* reported. There were seven on Cape Clear Island earlier in the month, four were trapped on Bardsey (Gwynedd), two seen on Lundy (Devon) and several were noted in the Isles of Scilly. Singles were scattered far and wide, north to Co. Durham and Argyll and west to Dublin. **Short-toed Larks** *Calandrella brachydactyla* were reported on Bryher (Isles of Scilly) from 9th-12th, at Nare Head (Cornwall) on 10th, Fair Isle on 21st-24th and on St Mary's (also Scilly) from 23rd-26th. A **Yellow Wagtail** showing the characters of the race *cinereocapilla* was seen at Marazion Marsh on 13th and individuals with the characters of *thunbergi* were reported from a number of localities on the East Coast from 20th onwards. Fair Isle produced a **Red-throated Pipit** *Anthus cervinus* from 23rd-24th and a **Richard's Pipit** *A. novaeseelandiae* was seen on St Agnes from 8th-13th. A **Rose-coloured Starling** *Sturnus roseus* in a garden at Cley from 19th to 29th performed well for its daily audiences and another stayed on Lundy from 15th to 1st June. The Isles of Scilly have never been as

well watched in spring as they are in autumn, but coverage is getting better each year as the number of records in this month's review indicates. Bird of the month from Scilly must have been the immature male **Rock Thrush** *Monticola saxatilis* on St Mary's on 19th. Another male **Black-headed Bunting** *Emberiza melanocephala* appeared, this time on Bryher, where it stayed from 9th to 15th, and one also turned up on 13th, at Wicklow Head (Co. Wicklow), but we did hear of one that escaped from captivity at Kelling (Norfolk) in the spring.

The Fair Isle **Song Sparrow** *Zonotrichia melodia* stayed until 7th; this small island produced some of the most outstanding records of the spring in early June, with a **Subalpine Warbler** *Sylvia cantillans*, a **Spectacled Warbler** *S. conspicillata* (third British record) and a **Cretzschmar's Bunting** *Emberiza caesia* (second British record). While the twitching fraternity amassed their savings for trips way up north, news broke of a singing **Rüppell's Warbler** *S. rueppelli* on Lundy (Devon), another



second record for Britain, first seen on 1st June and ringed on 4th June. A second **Subalpine Warbler** was reported, from Dungeness on 2nd June, and also very exciting to see were single male **Collared Flycatchers** *Ficedula albicollis* at Wraxhall (Avon) on 24th April and at Bressay (Shetland) on 26th. **Melodious Warblers** *Hippolais polyglotta* normally turn up only in southwestern Britain and southern Ireland, so that individuals at Sandwich Bay on 1st June and trapped at Flamborough Head (Humberside) on 26th are extremely interesting, the latter being a first county record. **Great Reed Warblers** *Acrocephalus arundinaceus* were reported from Cape Clear Island earlier in the month, way up north at St Abbs (Borders) on 30th and at Chichester (West Sussex) on 2nd-3rd June. On 2nd June, a **Marsh Warbler** *A. palustris*

and an **Icterine Warbler** *H. icterina* appeared on Fair Isle, and Flamborough Head had one of the latter on 5th June. To round off this mass of interesting warblers came news of a **Fan-tailed Warbler** *Cisticola juncidis* at Damerham (Hampshire) on 28th.

Latest news

New to Britain and Ireland, if accepted: **Aleutian Tern** *Sterna aleutica* at Inner Farne (Northumberland) on 28th-29th May. In first half of July: **Lesser Golden Plover** *Pluvialis dominica* on Tees-side.

Review

The position of 'Reviews' has been changed to allow more design flexibility.

The Hen Harrier. By Donald Watson. T. & A. D. Poyser, Berkhamsted, 1977. 307 pages; 4 colour plates, many black-and-white illustrations. £6.80.

One of the best things in British ornithology recently has been the appearance and growth of the publishing firm of T. & A. D. Poyser. It has produced a small stream of good books and, while the quality of the texts has varied, the quality of production has not: it has been uniformly high, and the firm's hand was clearly visible in the BTO/IWC *Atlas* publication. All these books are nicely bound and printed and have a good 'feel' to them. My copy of Witherby's *Handbook* is now 30 years old and all five volumes are still holding together, whereas my one volume of the new handbook—*BWP*—does not have the same nice feel and is already cracking at the seams.

The Hen Harrier by Donald Watson enhances the reputation of the publishers still further, and it must have been a great delight to them to have a good author who is also a good artist. This book is beautifully illustrated throughout, with many black-and-white pictures and sketches and four coloured plates. I only wish there had been more of these, but it is important to keep the cost of books within reasonable bounds and this one seems well-priced.

Living as I do in Orkney, it is easy to become obsessed with this magnificent bird of prey and Donald Watson's book is the result of such an obsession. The author's love affair with harriers started in France in 1937, continued in several parts of the world and culminated in a study of Hen Harriers nesting in his home country of southwest Scotland. He has obviously read everything he can lay his hands on—the bibliography contains over 280 references—and corresponded widely.

The book starts with two chapters about the harriers of the world, their identification and plumages. Then there are six chapters, grouped together as Part 1, about the species' history in Britain (a fascinating chronicle of decline and recovery), its food and hunting habits, breeding cycle, migrations and winter distribution, and its role as an artist's bird. Then, Part 2 describes in ten chapters the results of the author's study of the harriers near his home; for me, this was the most satisfying part of the book.

It must have been very difficult drawing together the results of his own and other people's work into a coherent whole, but I am not sure that Donald Watson found the best solution. The division into two parts has meant that various aspects are dealt with twice and I found that I was regularly having to cross-reference comments. This criticism, however, should not be allowed to stop anyone buying this valuable and important book. Rarely is a bird described in such depth with such charm; the book will be invaluable for all students of harriers and will delight and interest anyone with an interest in birds.

In the concluding chapter, Donald Watson thoughtfully and reasonably discusses the opposing views concerning protection or shooting of what he describes as 'this controversial bird'. I hope that those who hate harriers—as well as those who love them—will read this book. The increasing demand for improved agricultural land and the increasing value of that land may pose big problems for moorland nesting birds in the future and these demands will be difficult to resist. That some of these birds also have to face the guns, traps and poisons of people who feel (probably mistakenly) that they pose a threat to their ability to kill large numbers of grouse seems quite unacceptable in these prosperous times.

The author says that his case for the defence of the Hen Harrier rests on how well he has told the story of its life. I conclude that he is a first rate advocate.

DAVID LEA

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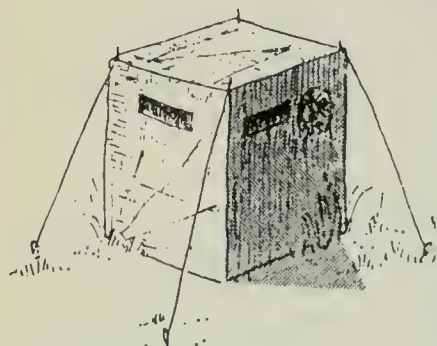
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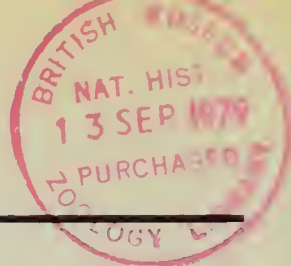
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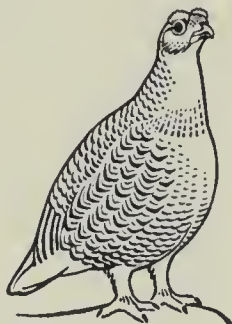
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British Birds publishes material dealing with original observations on the birds of the west Palearctic. Except for records of rarities, papers and notes are normally accepted only on condition that material is not being offered in whole or in part to any other journal. Photographs and sketches are welcomed.

Papers should be typewritten with double spacing and wide margins, and on one side of the sheet only. Authors should carefully consult this issue for style of presentation, especially of references and tables. Vernacular and scientific names and sequence of birds follow **The 'British Birds' List of Birds of the Western Palearctic** (1978); names of plants follow Dony *et al.* (1974, **English Names of Wild Flowers**); names of mammals follow Corbet & Southern (1977, **The Handbook of British Mammals**). Figures should be in Indian ink on good quality tracing paper, drawing paper, non-absorbent board or light blue or very pale grey graph paper; lettering should be inserted lightly in pencil; captions should be typed on a separate sheet.

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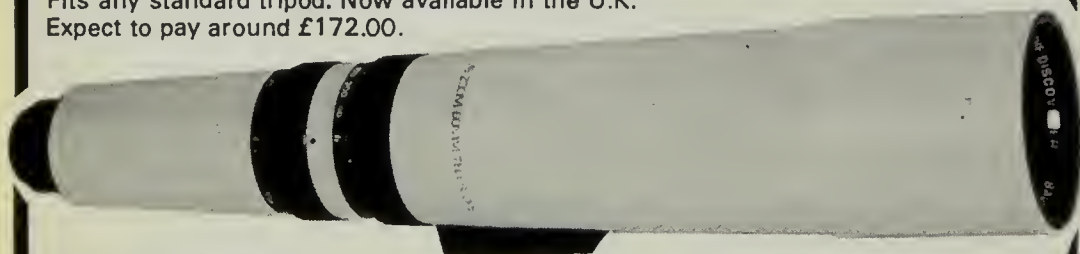
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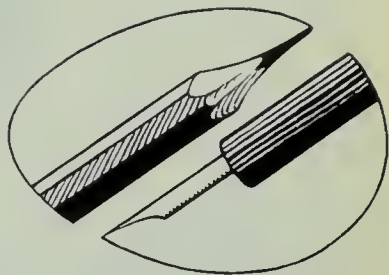
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British Birds

VOLUME 72 NUMBER 9 SEPTEMBER 1979

'Bird Illustrator of the Year' and 'The Richard Richardson Award'



Eighty artists submitted a total of 320 illustrations for these awards, testifying to the great interest in drawing birds that is manifest today. We selected 52, representing the work of 34 artists, for display at a press reception to be held in London on 12th September, when the awards will be presented.

The winners were as follows:

BIRD ILLUSTRATOR OF THE YEAR, 1979

1st Crispin Fisher (Aylesbury, Buckinghamshire)

2nd Laurel A. Tucker (Bristol, Avon)

3rd Alan Harris (Harlow, Essex)

THE RICHARD RICHARDSON AWARD Alan F. Johnston (Glasgow, Strathclyde)

It was encouraging to see the high general standard. As we assessed the entries during the judging, however, we kept making the same general comments about technical and ornithological matters and it may be helpful to the illustrators who took part, and to all who may submit work for both future competitions and for publication in this and other journals, to detail certain points here.



Fig. 1. WINNER, BIRD ILLUSTRATOR OF THE YEAR, 1979: Great Grey Shrike *Lanius excubitor* (Crispin Fisher)

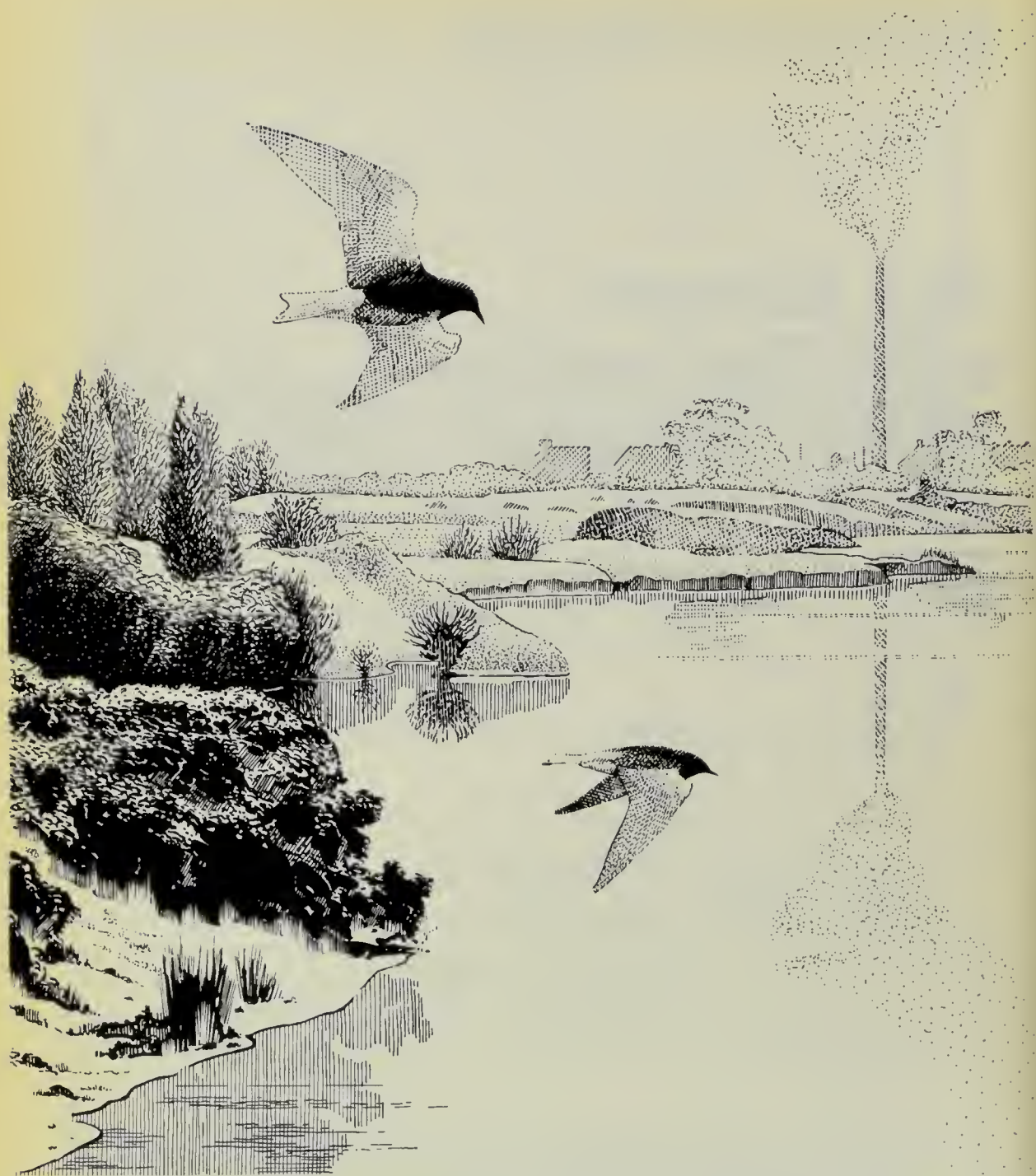


Fig. 2. WINNER, BIRD ILLUSTRATOR OF THE YEAR, 1979: Black Terns *Chlidonias niger*, Buckinghamshire, May 1979 (Crispin Fisher)

Several entries were submitted on black scraperboard, which is seldom a suitable medium for magazine illustration since the printing of large areas of black can often be tricky and look unattractive on the printed page. The illustrators who adopted this technique usually used only the finest scraper, producing delicate lines that would be lost when reduced for publication. The seductive delight of scraping on black frequently leads the artist to forget the purpose for which the drawing is intended and to indulge in flights of technical skill, creating subtle areas of tone which the harsh realities of reproduction would turn to areas of murky disappointment.

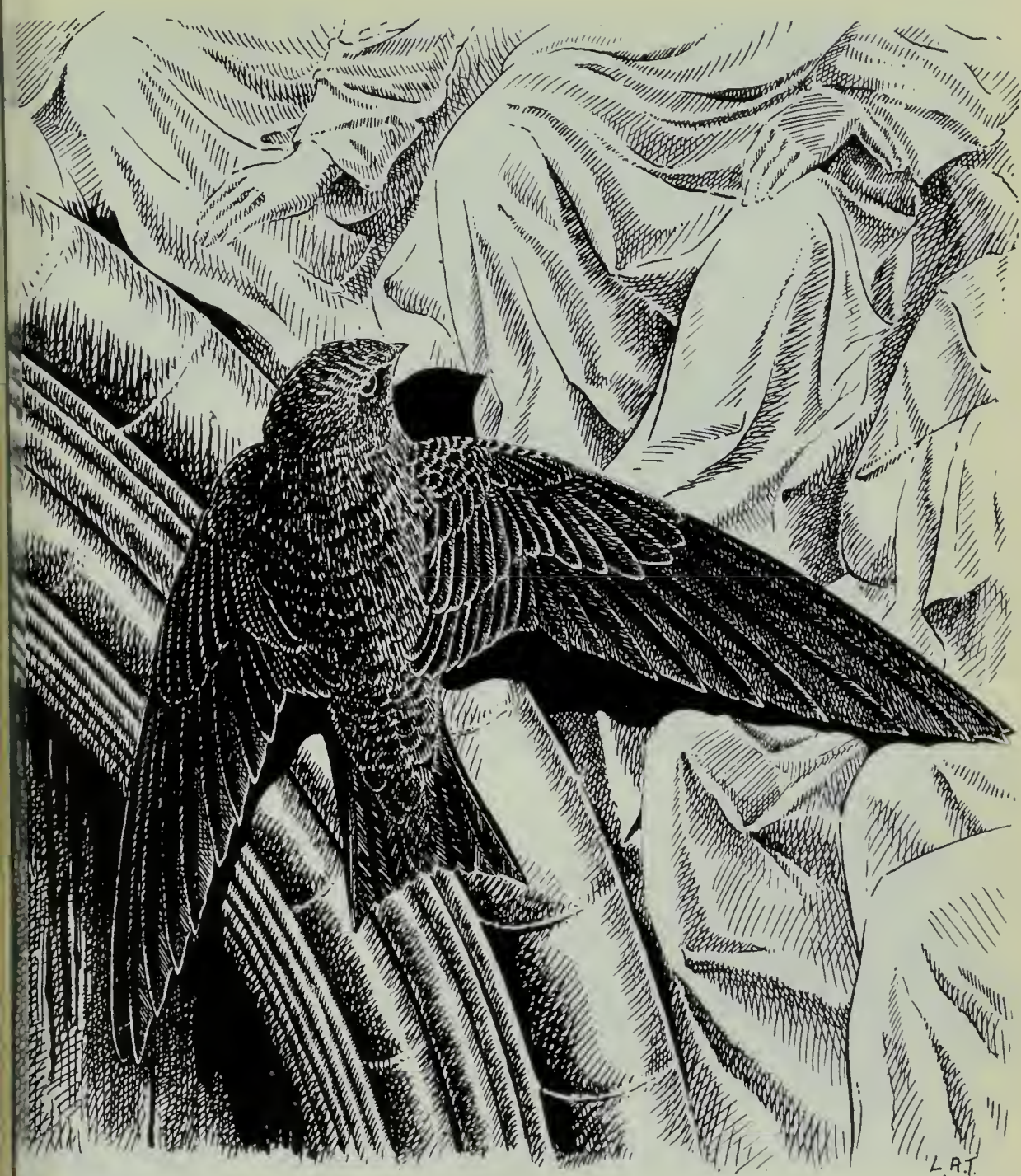


Fig. 3. 2ND PRIZE, BIRD ILLUSTRATOR OF THE YEAR, 1979: Swift *Apus apus* on church arch (Laurel A. Tucker)

White or screened scraperboards produced work of far greater suitability, as exemplified by the winning entries.

The use of extremely fine, detailed penmanship disqualified some work, otherwise well drawn, because of its unsuitability for reduction or, in some cases, even for printing at its original size. Few black ball-point pens are suitable for line-drawings intended for reproduction and should be avoided. Many drawings were over-elaborate or unnecessarily fussy and the needs of a magazine like *British Birds* were often insufficiently considered.

Of all the parts of a bird's anatomy, its feet seem to give the greatest problems to most bird artists, followed perhaps by the angle of the bill and



Fig. 4. 3RD PRIZE, BIRD ILLUSTRATOR OF THE YEAR, 1979: Bittern *Botaurus stellaris*, drawn from four birds wintering in east Hertfordshire in January 1979 (Alan Harris)

the placing of the eye. So many drawings are let down by these—admittedly difficult—areas. As in most aspects of drawing birds, there is no substitute for first-hand observation of the living bird, but a study of skins, stuffed birds and even photographs can help in understanding the size of feet, the relative lengths of the toes, the number of joints in each and the way they grip perches of differing thicknesses. Bill shapes are all-important too: a slight increase in length or breadth can completely alter a bird's character. The bill must be seen as an extension of the skull, and the fact that the upper mandible is fused to the skull, and the relation of the position of the eye to



Fig. 5. 3RD PRIZE, BIRD ILLUSTRATOR OF THE YEAR, 1979: Little Owl *Athene noctua* with Storm Petrel *Hydrobates pelagicus* on Skokholm, Dyfed (Alan Harris)

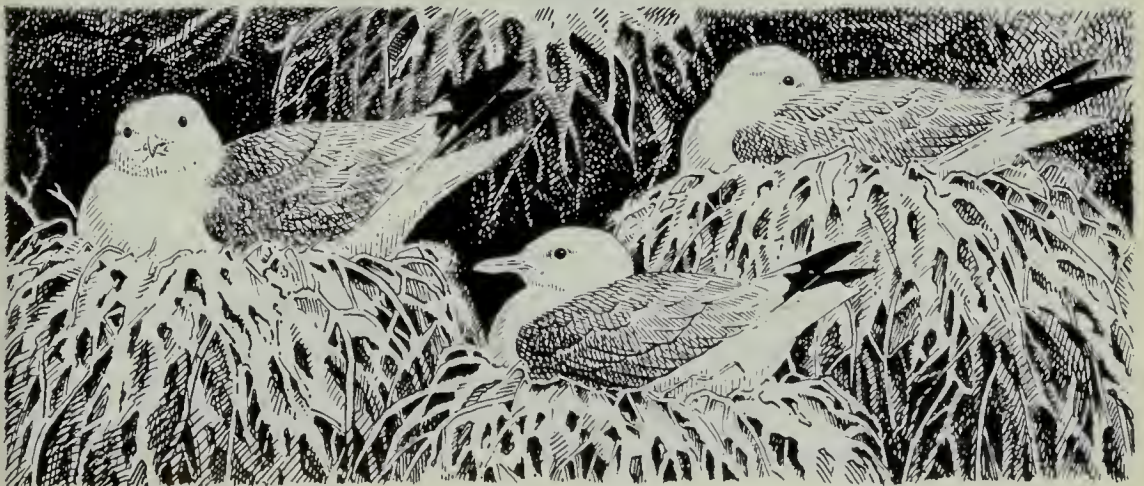
the corner of the gape, are both vital in catching the correct 'jizz', which gives that vital spark to a successful drawing.

Feather texture is difficult to depict successfully in a drawing, and a compromise has to be found when working in line. It is all too easy to use the strokes of the pen to try to reproduce the detail of individual feathers, and the difference in areas of colour and tone add to the complications that can ensue. On a bird with simple areas of plain colour and tone (Waxwing, for example), the individual feathers do not show in life except in the closest, most favourable views.

One regrettable tendency, seen in too much bird drawing and painting today, is the deliberate breaking of the vane of feathers, particularly those of wings and tail, at regular intervals along their length. Only birds in the direst straits would allow their feathers to get into such a state—the whole purpose of regular preening is to keep feathers in perfect condition—but we were presented with many desperately sick specimens that had not had a good preen in days. There are other ways of achieving feather texture without resorting to such tricks.

If a bird is to be drawn on a perch—be it twig, flowering spray or

Fig. 6. 2ND PRIZE, BIRD ILLUSTRATOR OF THE YEAR, 1979: Kittiwakes *Rissa tridactyla* (Laurel A. Tucker)



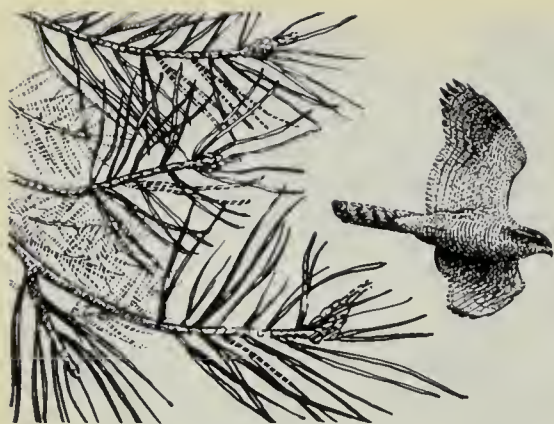


Fig. 7. WINNER, BIRD ILLUSTRATOR OF THE YEAR, 1979: Male Goshawk *Accipiter gentilis*, from field-sketches in Suffolk, April 1979 (Crispin Fisher)

rock—we think it reasonable that this should be given the same consideration and study as the bird itself. So often, the perch did not bear analysis. Also, the scale of bud, flower or leaf should be carefully worked out in comparison with the bird: this can be very helpful in indicating the size of the bird. Failure to consider scale can lead to an apparently huge Grey Wagtail beside a tumbling stream or a Red Grouse dwarfing its moorland range.

Some of the best and most interesting drawings were those which were based on first-hand knowledge and which recorded some specific observation or piece of behaviour. Crispin Fisher's Black Terns (fig. 2), flying over Calvert Jubilee Reserve (Buckinghamshire), on 'a still, lifeless day with virtually no light or shade' carried real conviction, as did his fine study of Tree Sparrows on a frost-blighted cabbage in February 1979 (the cover design of this issue). His winning quartet of drawings were in four contrasting styles and moods and all were successful. Among the runners up, we found that all had at least one entry that was less successful than the rest, where perhaps the artist had overstretched his or her knowledge: 'trying too hard' is how we put it at the time. The least dramatic drawings were often the best, where it was clear that the inspiration had been the observed moment, recorded in a sketchbook and redrawn without fuss or striving for effect.

Each artist had to submit four drawings, which were judged as a set. On the purely technical side, it was surprising and disappointing that a high proportion of the drawings was not within the range of sizes that had been given in the rules. We also did not look at all favourably on those that were direct (and often poor) copies of well-known photographs: photographers have every reason to feel aggrieved to see the fruits of their labours plagiarised so regularly in magazines and exhibitions and we unhesitatingly rejected all those that we recognised.

With 320 drawings to look through, we were delighted to find many of a high standard; sorting out the final half dozen, where the artists had provided sets which were strong on artistic, ornithological and technical grounds, was very difficult. Crispin Fisher's group stood out on all three counts. Mrs Laurel Tucker's drawings were all admirable, technically excellent and ornithologically sound. Alan Harris was let down by one of his four, but the others were all successful, with an understanding of texture and with well-drawn surroundings.



Fig. 8. WINNER, THE RICHARD RICHARDSON AWARD, 1979. Tawny Owl *Strix aluco*, based on sketch of captured, injured specimen (Alan F. Johnston)

We were, however, disappointed by the general standard of work sent in by artists under 21 years old: those eligible for the first Richard Richardson Award. Alan Johnston's prize-winning drawings virtually selected themselves. We are sure there is much more breadth of talent among this age group and hope that all readers will draw this competition to the attention of young bird-artists. There is an announcement concerning the Richard Richardson Award Fund on page 441.

ERIC ENNION, ROBERT GILLMOR and J. T. R. SHARROCK

Fifty years ago . . .

'During the frost, especially towards the end [of February-March 1929], large numbers of dead wild fowl came down the Severn at Bridgnorth; either shot or perished of cold and starvation. People waited by the riverside trying to get some of them.' (*Brit. Birds* 23: 99, September 1929.)

Yellow-bellied Sapsucker: new to Britain and Ireland

David B. Hunt



At about 12.00 GMT on 26th September 1975, DBH and a small group of other birdwatchers, including Mr & Mrs J. H. Chinnery, Mr & Mrs V. Dobson, D. J. Lewis and H. W. Oliver, found a small woodpecker (Picidae), which no-one could immediately identify, among scrubby willows *Salix* at the southeast corner of Tresco Great Pool, Isles of Scilly.

Suspecting a Nearctic species, since the weather during the previous 48 hours had been westerly, with gale-force winds and torrential rain, an attempt was made to get a detailed field description, though this was hindered considerably by poor light conditions, with hazy sunshine from behind the trees in which the bird was being viewed. By piecing together the collected observations of the group during the few minutes that it was in view, however, a good enough picture of the bird emerged for a tentative identification to be made after consulting the generally available American field guides. It was judged to be an immature Yellow-bellied Sapsucker *Sphyrapicus varius*. This was later confirmed by DBH and many other ornithologists who saw the bird during the days until it was last seen on 6th October. It was further considered to be an immature male in transitional plumage. The details observed were as follows:

SIZE Small, squat woodpecker roughly equivalent in size to Three-toed Woodpecker *Picoides tridactylus*. **PLUMAGE** Crown flecked greyish, with distinct scarlet tinge on forehead. Nape paler grey, merging into dirty-white barring and mottling in centre of mantle. Facial pattern: dark line from forehead through eye broadened into indistinct greyish mottling of neck. Another dark line ran from base of lower mandible, also merging into mottling of neck. Broad whitish

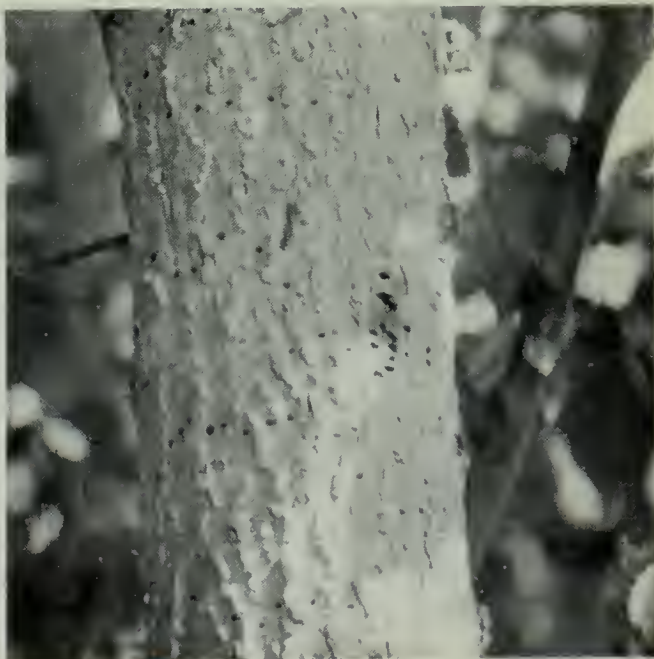
eyebrow contrasting with darker crown began above eye and merged with mottling of neck to give capped appearance in some views. Another broader white line ran from above base of bill, below eye and also merged with mottling of neck. When viewed head-on, apparent conjunction of these markings above base of bill, to give narrow white forehead topped by dark line, above which was a touch of bright scarlet. Chin similarly tinged with scarlet on diffuse grey back-

ground, becoming darker grey on throat, in band linked with lower dark neck mark to form gorget. Upper breast mottled paler grey, finishing suddenly to give roughly triangular area of lemon-yellow on lower breast and belly. Sides of breast and flanks dirty-white with olive tinge, and variety of dark flecks and notches. Undertail-coverts streaked dirty-white. Wings: secondaries and coverts black, contrasting with creamy-white primary coverts, giving broad longitudinal wing-bar along front edge of closed

wing. Primaries black, with creamy-white spots and edges. Tertiaries black, scalloped with creamy-white edges. Scapulars broadly barred white on black. Rump white. Outer tail feathers black, with white edging. Central tail feathers shorter than pointed outers, with black-and-white barring. **BARE PARTS** Bill greyish-horn, with tip and lower mandible darker; comparatively long and heavy for small woodpecker. Legs greyish. Iris black.



206. First-winter male Yellow-bellied Sapsucker *Sphyrapicus varius*, Isles of Scilly, September 1975 (David B. Hunt)



207. Holes drilled by Yellow-bellied Sapsucker *Sphyrapicus varius*, Isles of Scilly, September 1975 (David B. Hunt)

Behaviour

Although the sapsucker spent some of its time among the willows in which it was first seen, it did not appear to be drilling for sap in them, though, on the first day, it was seen and heard tapping on more than one occasion. This was perhaps before it discovered the nearby elms *Ulmus*, where it was most frequently watched during its stay on Tresco. It was here that the bird seemed to find the right kind of tree-trunk to work on, and the rings of holes which it made (plate 207) are still clearly visible three years later.

The sapsucker worked the trees methodically, normally starting less than 1 m from the ground, moving up the trunk gradually until reaching a height of 5-6 m before flying low again to start on the next tree. After a few days, the marks of the bird's activity became visible, with the appearance of rows of holes drilled horizontally at varying heights, but especially at around 4-5 m, where the bird spent most of its feeding time. The holes were fairly evenly spaced, in rows of six to eight, 1-2 cm apart, but occasionally were closer spaced vertically as well as horizontally. Holes were visited approximately hourly in rotation, and the bird rarely spent more than a minute or two in one spot while apparently feeding, though at times it would remain motionless for several minutes against the trunk, either as a concealment tactic or simply just resting.

Little sap appeared to be reaching the mouths of the holes during the sapsucker's period of absence, but wasps *Vespula* and flies (Diptera) were attracted and might have formed part of its diet. On one occasion, it was seen to withdraw and swallow a white object at least 1 cm in length, which could have been an insect larva of some sort.

The sapsucker normally moved upwards in short, jerky progressions, though on a few occasions it was seen to move diagonally down the trunk a short distance, tail-first. Once, it was seen to perch rather awkwardly among thinner branches in the manner of a typical passerine. On the few brief occasions that it was seen on the wing, it appeared to have the undulating flight typical of the familiar European woodpeckers. No recognisable calls were heard.

Status

In North America, this is a common species, sometimes considered a pest in areas of concentrated horticulture and silviculture. The breeding range extends as far north as Newfoundland and south to the mountains of North Carolina. It winters in the southern United States, Central America and the West Indies, and has occurred as a vagrant in Bermuda and Greenland. In Europe, the only evidence of vagrancy is an unpublished record from Iceland based on a skin in the Museum of Natural History in Reykjavik, for which few data are available (A. Petersen *in litt.*). This is therefore the first record for Britain and Ireland, and the first published record for Europe.

Associated occurrences

Autumn 1975 is now widely accepted as having been an exceptional period for the occurrence of Nearctic species in Britain, including several land-birds in addition to the now annually expected long-distance wader migrants.

In Scilly alone, a total of at least 20 individuals representing no less than 12 North American species was recorded, including a Black-and-white Warbler *Mniotilta varia* (Brit. Birds 69: 354) and a Scarlet Tanager *Piranga olivacea* (70: 300-301), both of which had occurred within 48 hours of the sapsucker.

Nearctic landbird vagrants were observed not only in Scilly during September 1975, but throughout Britain (strangely, there was none seen in Ireland). The build-up to the climax at the end of that month (arrival dates only, of passerines and near-passerines) was as follows:

- 6th Tennessee Warbler *Vermivora peregrina*, Fair Isle, Shetland
- 18th Bobolink *Dolichonyx oryzivorus*, Out Skerries, Shetland
- 23rd Black-billed Cuckoo *Coccyzus erythrophthalmus*, Redcar, Cleveland
- 24th a second Tennessee Warbler on Fair Isle
- 25th Red-eyed Vireo *Vireo olivaceus*, Aberdaron, Gwynedd
- 26th Rose-breasted Grosbeak *Pheucticus ludovicianus*, Sark, Channel Islands
- 26th Yellow-bellied Sapsucker, Tresco, Scilly
- 27th Black-and-white Warbler, St Mary's, Scilly
- 28th Scarlet Tanager, Tresco, Scilly

This remarkable series of occurrences was followed by an interval of several days before the next Nearctic passerines were found: a Bobolink on St Mary's, Scilly, on 9th October and a Blackpoll Warbler *Dendroica striata* on St Agnes, Scilly, on 19th October.

Weather

Following a prolonged spell of unsettled weather in mid September, the effects of which were felt mostly in northern Britain, with westerly gales, torrential rain and birds to match, a vigorous and fast-moving depression, originating over Newfoundland on 22nd, arrived in western Britain by 24th and rapidly spread northeast across the country. The winds in the warm sector between the warm and cold fronts to the south of the centre of this depression provided ideal conditions for a very rapid transatlantic flight, possibly as short as 48 hours, and it seems likely that the sapsucker and other Nearctic landbirds discovered during the period 25th to 28th September all arrived in association with this depression.

Discussion

In his comment on this record, D. I. M. Wallace (Brit. Birds 69: 343) expressed surprise that a sapsucker rather than a Yellow-shafted Flicker *Colaptes auratus* should have been the first Nearctic woodpecker to reach Britain or Ireland, and referred to Durand (1963), who reported a flicker surviving a lengthy transatlantic crossing in October 1962. Later, Durand (1972) gave further support to the probability of a flicker being first to reach Europe, citing encounters with no fewer than 21 flickers at sea, as opposed to only one sapsucker. The sapsucker is, however, the only American woodpecker known to undertake oceanic voyages regularly, crossing the relatively short distance from Florida and other southern states to Cuba and other West Indian islands each autumn. Thus, it is probably better adapted for oceanic crossings and more likely to arrive in Europe unassisted, given favourable weather conditions.

The likelihood—or otherwise—of assisted passage has been much argued in the literature already cited and also by Nisbet (1963). The possibility cannot be ruled out, but the appearance at the same time in Scilly of two other Nearctic species, both of them seemingly less likely to withstand a shipboard voyage, favours the probability of a non-assisted passage for all three. Furthermore, the wide scatter of other vagrants through Britain at the same time also points towards this alternative.

Acknowledgements

I should like to thank R. W. Allen for helpful comments on the first draft of this paper; I. Dawson, B. King and R. Hudson for help with reference to the appropriate literature; and K. Allsopp for providing me with relevant weather information.

Summary

An immature male Yellow-bellied Sapsucker *Sphyrapicus varius*, a widespread North American woodpecker, was discovered on the Isles of Scilly on 26th September 1975, remaining until 6th October. This is the first record for Britain and Ireland. The occurrence is discussed with reference to the weather and the appearance of other Nearctic landbirds in Britain at the same time, and the probability of non-assisted passage is suggested.

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David B. Hunt, 16 Silver Street, St Mary's, Isles of Scilly TR21 0JG

Hermit Thrush: new to Britain and Ireland

R. A. Broad



Norman Arlott 79

At about 09.00 GMT on 2nd June 1975, S. Rumsey was walking through Field Croft on Fair Isle, Shetland, when he observed a small thrush-like bird with a well spotted breast and a prominent red tail feeding in the open

on newly ploughed land. Realising that it was a species with which he was totally unfamiliar, he made careful note of the salient features and then attracted the attention of a number of other observers. H. Nash, P. J. Roberts and I were the first to arrive and we were quickly able to confirm SR's initial impressions, variously likening the bird to a small Song Thrush *Turdus philomelos* with a red tail or a Thrush Nightingale *Luscinia luscinia* with a heavily spotted breast. The bird proved to be both obliging and approachable, and for the rest of the day it remained around the same, small ploughed field where many observers were able to watch it quietly as it fed unconcernedly at ranges down to 9 m.

Its habits, stance and structure were typically thrush-like and, although appearing smaller, it basically resembled a Song Thrush. The upperparts were fairly uniform medium olive-brown and the underparts were clean white, boldly marked across the throat and upper breast with large blackish spots. The most distinctive feature was the tail, which was bright reddish-brown along its whole length, this colour extending onto the uppertail-coverts, where it contrasted noticeably with the brown tones of the rest of the upperparts. From some angles, the reddish colour of the uppertail-coverts appeared to extend downwards on either side around the base of the tail. The wings were a similar brown to the upperparts, but an area on the primaries and perhaps some of the outer secondaries was a warmer, more reddish hue, and there was a suggestion of a faint wing-bar on the closed wing, formed by small pale tips to the greater coverts. The face lacked any distinctive features, although, at close range, there was a suggestion of a short, pale supercilium. Field notes were taken by several observers and, from our joint observations, we felt sure that the bird must be one of the New World thrushes, but were uncertain to which species it belonged. Having watched the bird for upwards of an hour, we sought to identify it by referring to Godfrey (1966), Peterson (1947) and Robbins *et al.* (1966). We quickly established that our notes tallied virtually word for word with Hermit Thrush *Catharus guttatus*, and that there were no similar species showing a combination of reddish-brown tail contrasting with an olive-brown back.

When the bird was originally located in the morning, the viewing conditions could be described only as reasonable; there was a moderate to strong northeast wind blowing and the cloud cover was complete. Later, however, the clouds cleared and we were able to watch in good sunlight. During the afternoon, an unsuccessful attempt was made to mist-net the bird. Additional notes were collected on its behaviour by several observers, some of whom attempted to photograph it from the cover of a nearby stone wall, and, just before dusk, P. Jackson, watching from this same vantage point, saw the bird tower up into the sky, gaining height until it was lost from sight; it was not seen subsequently.

During the day, the following characters were recorded and agreed by all observers. It appeared to be similar in proportion to a Robin *Erithacus rubecula* or a dumpy Song Thrush and, on a number of occasions when it was chased by Wheatears *Oenanthe oenanthe*, which had been feeding nearby, a direct size comparison indicated that the two species were of similar size. It

is quite likely, however, that some of the Wheatears were of the large Greenland form *O. o. leucorrhoa*. During these sorties, it would, when pressed, anxiously flick its wings and occasionally raise its crown feathers. Short flights from place to place were invariably low over the ground and would almost always be followed by the bird alighting with a very upright stance, bill held a little above the horizontal and tail and wings held very low, after which the tail would be slowly raised above the level of the wings. Its general feeding habits were thrush-like, taking either a series of hops or a short run, followed by a brief stop to stand upright before stooping to pick up something from the ground. At other times, it would pick up an item after making a short rush with head and neck extended, before resuming its characteristic erect stance. Although it favoured the edge of the roughly ploughed field and the bordering short-cropped grass, it also spent much time feeding between the ridges turned up by the plough and was not averse to feeding out in the open on the top of the ridges. The following description was taken in the field:

UPPERPARTS Forehead, nape, mantle, scapulars and lower back all medium olive-brown, with faint greenish tinge in some lights (similar to Song Thrush). Crown similar to mantle, but a little darker and redder and apparently lacking greenish tinge. Lower rump, uppertail-coverts and all tail feathers reddish-brown, in brightness judged to be between red of tails of Thrush Nightingale and Redstart *Phoenicurus phoenicurus*. Lores and ear-coverts perhaps a little paler and more mottled than mantle, especially around eye. Supercilium indistinct, short and pale. Eye-ring incomplete and whitish. **UNDERPARTS** Chin and moustachial region white and unspotted. Throat, upper breast and anterior flanks clean white, with clear, well demarcated, large blackish spots. Lower breast, belly and vent region clean white. Lower flanks and towards base of tail washed buff. At some angles, reddish colour of rump appeared to extend downwards onto lateral undertail-coverts as patch. **WINGS** Coverts similar to mantle, but greater coverts with narrow, pale tips, giving faint



208. Hermit Thrush *Catharus guttatus*, Shetland, June 1975 (Stephen Rumsey)

wing-bar on closed wing, which also visible in flight at close range. Primaries and secondaries darker than coverts; primaries and perhaps some outer secondaries with reddish tinge. Tertiaries similar to inner secondaries, but edged a little paler. **BARE PARTS** Bill thrush-like in structure, light brown, but paler at sides and towards base. Eyes large, dark and prominent. Legs long and pale pinkish, recalling Tree Pipit *Anthus trivialis* in coloration. **VOICE** No calls heard.

The breeding range of the Hermit Thrush is extensive in North America, where it occurs in a broad band stretching in the north from central Alaska across Canada to Newfoundland and extending as far south as southern California, northern New Mexico, central Minnesota and Pennsylvania, and western Maryland. It is a woodland bird, occurring in both mixed deciduous-coniferous forests and in pure coniferous stands, where it inhabits mainly the forest floor. It is recognised as one of the finest—if not the finest—singer of all North American birds. It winters from the southern parts of its breeding range to Baja California, Guatemala and southern Florida (Godfrey 1966). In Europe, it has previously been recorded as an accidental in Iceland and Germany.

The Hermit Thrush is the fourth member of the genus *Catharus* to be identified in Britain and Ireland: the three previously recorded species being the Grey-cheeked Thrush *C. minimus*, Swainson's Thrush *C. ustulatus* and Veery *C. fuscescens*. Some general notes on these four species have been given by Allsopp (1972) and Harding (1979).

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Nearctic landbirds in Britain and Ireland: a meteorological analysis

Norman Elkins



The occurrence of migratory North American landbirds in Britain and Ireland is irregular and uncommon, but records have become more frequent in recent years. They occur mainly in autumn, and primarily involve those long-distance migrants which breed in eastern North America and winter in the West Indies and South America.

Among studies of vagrancy have been those of Nisbet (1963a), Sharrock (1971) and Durand (1972), while useful summaries of the normal migration have been made by Richardson (1972, 1974, 1976). Nisbet favoured a natural wind-assisted mechanism as the primary cause of vagrancy, whereas Durand emphasised that ship-assistance should not be underestimated, but no detailed studies of the associated weather patterns were attempted. This paper aims to identify and describe the synoptic situations

thought to influence vagrancy, with emphasis on the autumn migration, and to analyse recent records in this context.

Normal migration

Autumn

The normal heading of migratory landbirds departing from northeast Canada, Newfoundland and Nova Scotia is SSW and southwest to eastern USA, where they join other migrants to continue down the Atlantic coast flyway. Radar, however, has also revealed occasional large passerine departures on a broad front from the coast between Nova Scotia and New Jersey on headings from SSW to southeast. This passage takes place from late August to November, and can be detected over Bermuda and Puerto Rico, especially after mid September, when there are substantial arrivals in the West Indies of wood-warblers (Parulidae), notably Blackpoll Warblers*. Many migrants follow a curved track between their departure point and the West Indies, arriving at Puerto Rico—2,900 km from Nova Scotia—mainly from the NNE. Since many of these birds fly on across the Caribbean Sea, 3,000- to 4,000-km non-stop flights are a regular feature of autumn migration (Richardson 1976).

Over the West Indies, passerines maintain a mean airspeed of about 36 kph, although this may be lower than at departure, as in spring the mean airspeed of departing birds is 43-54 kph. Mean altitudes are over 2,000 m (6,560 feet), often up to 4,000-5,000 m (13,100-16,300 feet), but become lower at night (Richardson 1974, 1976).

Spring

In spring, there is minimal passage over the western Atlantic. Migrants passing over Puerto Rico orient northwest towards Florida, and no arrivals from the south or southeast have been detected in Nova Scotia (Richardson 1974). Some migrants do not stop in southeast USA, but continue north-east, especially in early April. These movements are greatly prolonged in strong following winds, and overshooting of southern species takes place to New England or even Nova Scotia, with probable flight times of 40 to 50 hours (Nisbet 1963a).

Autumn vagrancy

Many long-distance migrants involved in vagrancy often carry enough stored fat to enable them to fly non-stop for 30 to 50 hours or longer (Nisbet 1963a), although Richardson (1976) indicated that small passerines are energetically incapable of flying non-stop from Nova Scotia to the West Indies (2,500 km) without a substantial following wind. Dorst (1962) quoted Voous as finding that Blackpoll Warblers and Yellow-billed Cuckoos arriving in the Dutch Lesser Antilles in autumn weighed only 50% of their normal winter weight in Venezuela, and that they were in a state of complete exhaustion. The approximate distance from Newfoundland to Ireland is 3,200 km, and that from New England to the Isles of Scilly is 5,100 km. These distances compare favourably with those of normal migration, and, given a steady following wind, are within a migrant's

*Scientific names of species mentioned in the text are given in table 1.

capabilities. Following winds over the migration route are considerably weaker than those frequently found across the North Atlantic. Vagrants in Britain are often in a similar state of exhaustion to that found on arrival in winter quarters, and some do not recover.

Falls of varying size are commonplace on shipping in unfavourable weather conditions, and, although the fastest ships take five to seven days to cross the Atlantic, both insectivorous species and the more easily fed seed-eaters occasionally survive ship-assisted crossings (Durand 1972).

Nisbet (1963a) concluded that the main area of origin of vagrant landbirds was the east coast of North America between 39°N and 45°N. The species recorded in Britain and Ireland during his analysis period (1951-62) had a more southerly origin than those in more recent years. He showed that many of these migrants often exhibited a reversed (northeast) movement, and he postulated that this might carry them into a zone favourable for initiating a crossing, namely westerly winds north of 45°N. Although charts of mean wind flow show this to be the main westerly zone, these winds are often associated with already well-developed depressions which slow down in the area south of Iceland. Nisbet described the looping trajectory to which birds would be subjected if drifted by winds into the marked cyclonic flow of such a depression, and the subsequent long delay in their eastward flight. He also showed that migrants moving in northwesterly winds to the rear of a depression orient away from the centre, so that displacement in higher latitudes is unlikely to be a major factor in transatlantic vagrancy.

Meteorological considerations in autumn

Navigation and displacement

Few long-distance migrants begin passage until certain conditions are fulfilled. Direct flight on a selected heading takes place during the bird's migratory state when astronomical clues are visible for navigation, although it will also start in overcast conditions provided that the clues have been discernible shortly before departure. Lateral drift by adverse winds can be corrected so long as it is not excessive and navigation remains possible; should displacement occur, however, the memory of a previous navigational fix may help reorientation (Lack 1962, Matthews 1968).

The ideal synoptic situation is an anticyclonic one, either a centre or a ridge of high pressure, or at least an area of rising pressure. The primary track of autumn depressions lies across Labrador, and such anticyclonic patterns often occur to the rear of the associated cold fronts, where the plunge of polar air gives an added stimulus to migration. The winds in this cold air moderate slowly as the depression moves away eastwards, and there is little cloud cover over land. Wind directions can be from anywhere between west and east through north, but are most prevalent from northwest and north. Richardson (1972, 1976) has shown that large passerine departures from northeastern USA and eastern Canada take place on most nights in these situations, with southerly to easterly movements densest in west to northwest winds, and mainly southwesterly movements in northeast to east winds. He also found that reversed passage in a northeasterly

direction commonly occurred with winds between south and west, even behind a cold front.

Over the western Atlantic, cold fronts regularly plunge south and southeast to 30°N, decelerating as they do so. The temperature contrast across the front is enhanced as it moves into an area where sea-surface temperatures change rapidly across the boundary of the Gulf Stream current, which has a mean position from near Cape Hatteras to 40°N 60°W. Most fronts in this area are vigorous, especially in winter, when the frequency of wave depressions forming along the edge of the Gulf Stream is high (Colucci 1976). Composite satellite photographs (US Air Force *et al.* 1971) reveal an increase in autumn in the mean cloudiness between Nova Scotia and Bermuda, which precedes the build-up of the winter period of cyclogenesis (formation of depressions). In September, 6/8 to 8/8 cloud cover can be expected for over 40% of the time north of 40°N in this area, with a narrow cloudy band southwestwards along the Gulf Stream boundary which indicates the mean position of the polar front. In October, this cloudy zone extends farther south by 2° to 3° latitude, with a large additional area between Bermuda and Florida. The polar front intensifies and extends southwestwards, with relatively cloud-free areas over the colder coastal seas north to 43°N. Cloud cover decreases rapidly south and east of the polar front.

Semipermanent subtropical anticyclones or ridges are common features of the Bermuda region, and, on occasions, very warm moist air is pushed north and northeast towards an approaching cold front around the north-western periphery of such a system. Under these conditions, this air can accelerate into one or more relatively narrow low-level jet streams ahead of the surface front (Browning & Pardoe 1973). Such a jet is characterised by a core of fast-moving air with a maximum velocity of up to 108 kph at an altitude of 1,000-1,500 m (3,300-4,900 feet), sometimes higher. At first, the air within the jet moves parallel to the cold front, and eventually becomes part of the warm-sector flow downstream. It has been suggested that such a feature may give rise to transatlantic vagrancy, in particular concentrating disorientated migrants and resulting in multiple arrivals in Britain (Allsopp 1977), although these jets are not normally associated with thick overcast conditions in the initial stages. Often, however, they originate where the cold front is long and trailing, up to 2,000 km from the parent depression, and it is in this region that waves most frequently form on the frontal surface. A cold-front wave has the effect of broadening the cloudy zone, intensifying the precipitation and retarding the frontal movement. This in turn maintains a broad warm sector by delaying the frontal occlusion process. Strong winds are also found at higher levels (above 2,000 m: 6,600 feet) in the warm air aloft, behind and parallel to the surface front often when lower-level winds are light. In circumstances where warm air is pushed towards a slow-moving cold front, there is sometimes a tendency for it to retrogress as a warm front, with a substantial northward extension of frontal cloud.

South- to southeast-oriented migrants thus regularly fly on a track with following winds which brings them closer to a frontal zone, and, although

the effect upon them of the complexities of horizontal and vertical airflow on the front is unknown, it is likely that the strong cross-winds within the frontal cloud are responsible for their initial displacement. Birds may become disoriented in the deep and active frontal cloud, especially near waves, and lateral drift by strong winds cannot be corrected. As a wave frequently becomes progressively more active as it moves eastwards, migrants taking an eastern route will be more at risk than those using a western route nearer the North American coast. Evidence has shown (Matthews 1968) that, given suitable conditions, adult birds, and to a lesser extent immatures, can alter their standard direction after displacement, and reorient to reach their intended goal. When cloud is dense enough to obscure astronomical clues absolutely, complete disorientation results, causing birds to fly in circles and, inevitably, to drift downwind. Landfall is not possible over the sea except on shipping, and radical and rapid displacement can follow. I believe that it is these frontal situations that initiate the majority of transatlantic crossings.

As the winds in the warm air in the vicinity of a front will be invariably opposed to the migrants' heading (i.e. between west and south), drift will result in displacement into the warm sector proper. A broad warm sector can be up to 2,000 km wide, with low-level winds of up to 125 kph. Under the extensive cloud cover nearer the depression, downwind flight, aided by following west to southwest winds, would enable a bird to cross the Atlantic rapidly. In October, cloud cover of 6/8 to 8/8 occurs for over 50% of the time over virtually the whole North Atlantic north of 44°N, and south to at least 40°N at longitudes west of 40°W (US Air Force *et al.* 1971). Crossings have a greater chance of success if the bird's trajectory keeps it close to the frontal zone, rather than in the central region of a warm sector, where breaking cloud may stimulate reorientation. This would halt eastward progress, although Evans (1968) has established that reorientation can take place in a reverse direction. A further obstruction to eastward progress arises if a warm sector is slowed or deflected by a blocking synoptic pattern. Such a pattern is normally caused by a slow-moving anticyclone over the North Atlantic or northwest Europe which effectively blocks westerlies.

If no significant cold-front waves develop, a warm sector occludes fairly rapidly, especially if the associated depression is vigorous and deepening. It is almost certain that vagrants in such a warm sector will overtake the warm front and be subject to a backed wind ahead of the front, not veered, as Nisbet (1963a) described. Nisbet believed that these birds, to maintain their track, must be able to navigate across the flow if they are to make landfall. Should they be able to navigate, however, they may attempt to reorient. A more logical answer depends on the birds' position relative to the centre of the depression, and also on the position of the centre relative to adjacent land masses. Near the centre, winds ahead of the warm front are sufficiently backed at low level to drift a vagrant quite considerably to the left, and landfall would be possible only if a landmass lay to the north or northeast of the centre. Farther from the centre at low level, and more especially at any point with increasing altitude, winds are often only

marginally backed, with little change of track resulting. Looping trajectories around a centre are far less probable in fast-moving wave depressions than in the slower-moving primary depressions.

The warm airflows south of a slow-moving cold front over the eastern USA, as described above, are identical with those established by Nisbet (1963a) as initiating reversed migration by several southern species, and he quoted Baird *et al.* (1959) as finding that these movements coincide with lulls in the migration of northern species. The apparent lull may be due to the latter being forced down by frontal cloud over land and drifted by cross winds over the sea; or, should frontal cloud extend well to the north, to the complete cessation of passage. Both random dispersal and reversed passage may also take birds into the warm-sector wind flow, and Nisbet gave a little evidence linking reversed passage with subsequent arrivals in Britain.

Altitude

Flight altitudes of 2,000-5,000 m (6,600-16,300 feet) over the West Indies are of the same order as those over the Sahara, where Moreau (1972) described the bulk of Palearctic migrants as flying at 1,500-2,500 m (4,900-8,200 feet), sometimes over 3,000 m (9,800 feet). In temperate latitudes, however, such as northeastern USA and northwest Europe, the mean altitude is 500-1,500 m (1,600-4,900 feet) (Nisbet 1963b, Eastwood & Rider 1965). Birds departing immediately to the rear of a cold front do so in a region where low-level following winds back with height to become strong cross winds approximately parallel to the front at 5,000 m (16,300 feet). The climb to higher altitude is probably made in the warm air, although there may be some gain in the convectional uplift at the front. Richardson (1976) suggested that the height chosen is that of the most favourable wind, with the higher altitude also to the bird's advantage with regard to temperature, as body-fluid loss will be lower in the cooler air. Eastwood & Rider (1965) gave evidence that the 0°C isotherm ('freezing level') may occasionally impose a limit upon flight altitude. This may occur primarily with flight through cloud which has a high water content—for example in an active front—as, above this level, the abundant supercooled water is probably inimical to a bird. The temperature at 1,000 m (3,300 feet) in a typical polar airmass over eastern Canada in October is around 0°C, and frequently lower. In the subtropical air south of the polar front, the height of an equivalent temperature is well over 3,000 m (9,800 feet) with a 1,000-m (3,300-feet) temperature of about 15°C. Temperatures in a typical warm sector arriving in southern England in October are somewhat lower: around 10°C at 1,000 m (3,300 feet), and 1°C at 3,000 m (9,800 feet). Although the altitude of a vagrant may be higher in warm air than in cold, arrivals in the most extreme southwestern parts of Britain and Ireland suggest that final altitudes are quite low. As there is very little convection available in the stable warm air, a tired vagrant may travel a considerable distance at low level in the final portion of its flight.

Tropical storms

Tropical storms are another, less frequent, source of involuntary displacement. These are encountered mainly south of 30°N, from August to

October, with peak frequency from mid August to mid September. Some intensify into hurricanes, and a few curve northeast into higher latitudes in the western Atlantic, where they occasionally become extra-tropical depressions with their own frontal systems. Passage of such a storm northwards during migration has severe and damaging results, sweeping migrants far off course over the ocean, where they perish, land on shipping, or drift in the very strong winds. Prolonged drift eastwards is improbable, as looping will result in the intense cyclonic winds. Only in the warm sector, if any, of the extra-tropical stage could this happen.

Durand (1972) has described spectacular falls on shipping during such storms, but draws an unwise comparison between reversed migration and displacement due to hurricanes, as both cause and effect are fundamentally dissimilar. Furthermore, the number of tropical storms in the area is small. Over the major shipping lanes north of 35°N, the seasonal mean is less than 1.5, diminishing farther north and east, and the recorded dates of vagrants in Britain are almost entirely after the peak of the tropical-storm season. Although most records in recent years cannot be attributed to tropical storms, Durand has shown that there are occasional landfalls of ship-borne survivors which are not necessarily recorded by land-based observers; and that other adverse weather, unrelated to tropical storms, may give rise to ship-assisted crossings.

Analysis

Methods

Records of all Nearctic passerine and near-passerine vagrants during 1967-76 (Smith *et al.* 1968-75, Dymond *et al.* 1976, O'Sullivan *et al.* 1977) were analysed with respect to 12- or 24-hourly synoptic charts for the previous few days, mainly Daily Weather Reports. The possibility of wind-assisted crossings was assessed by carrying out back-tracking calculations of trajectories, applying airspeeds of 0-36 kph added to measured winds at a flight altitude of 900 m (3,000 feet). In some cases, significant cloud cover over the Atlantic was scrutinised with the aid of satellite imagery. Initially, back-tracking was originated at the place, and on the first date, of the record; but, if no suitable trajectory was obvious, earlier dates were studied. In south-west Britain, many vagrants are likely to be discovered soon after their arrival, especially at well-watched sites such as the Isles of Scilly.

Wind direction and velocity at 900 m (3,000 feet) can be measured from the isobars on a synoptic chart with an accuracy sufficient to indicate an approximate trajectory and duration of crossing. The accuracy increases with measurements made solely in the warm sectors of fast-moving waves, where synoptic development is not large (i.e. if the waves do not deepen substantially). In a homogeneous warm airmass, wind directions remain relatively constant with increasing altitude, and velocities increase slowly; thus, with trajectories above 900 m (3,000 feet), errors would probably concern timing rather than track. Substantial errors can accumulate during calculations of trajectories using charts at more than six-hourly intervals, but these errors are smallest in warm-sector wind flows.

Owing to the many unknown variables inherent in the behaviour of the

birds and in the structure of the weather systems, a completely objective analysis is impossible. Nevertheless, in many situations it was possible to determine fairly easily if certain vagrants could have undertaken a crossing within a time-scale that would ensure survival.

Results

AUTUMN The dates of arrivals in Britain and Ireland fell between early September and late November, with half of the records in the middle two weeks of October. The temporal distribution was similar to that shown by Sharrock (1971) for the period 1958-68. Over 70% were observed in southwest Britain.

Three-quarters of the vagrants could be associated with the arrival of warm sectors which had crossed the Atlantic within two to three days. Most of the warm sectors originated in conjunction with cold or quasi-stationary fronts in the area bounded by Bermuda, 60°W and the coast between Nova Scotia and Cape Hatteras. Fig. 1 indicates the probable trajectories of over 70% of wind-assisted vagrants, the majority of which were close to a frontal zone. There were several instances in which vagrants apparently originated in eastern Canada in warm sector conditions, and these may have been migrants on reversed passage. The time factor frequently suggested that many vagrants actively flew downwind.



Fig. 1. Schematic representation of autumn trajectories of Nearctic migrant and vagrant landbirds, also showing some place names mentioned in text. Broad, broken arrow shows route of over-sea migrants; solid lines enclose trajectory zone of 72% of wind-assisted vagrants recorded in Britain and Ireland during 1967-76; narrow arrows show direction of reversed passage migrants

The largest falls took place in the Octobers of 1967, 1968 and 1976. Mean sea-level pressure charts for these months showed a strong direct wind flow across the Atlantic some 5° of latitude farther south than in other years. Winds in other Octobers were too weak, too blocked or originated too far

north to carry any more than a few vagrants to Britain. An inverse relationship was found between the number of vagrants and the frequency of blocking patterns. The most blocked autumn was in 1972, when no vagrants were recorded. The recent falls of late September 1975 and October 1976 are described below to illustrate the synoptic situations in detail.

A study of the hurricane seasons disclosed little relationship between tropical storms and vagrancy, and few such storms crossed migration routes near main shipping lanes after mid September. One or two became extra-tropical and crossed the Atlantic rapidly, but none brought vagrants. The 1976 fall was described in O'Sullivan *et al.* (1977) as just another hurricane fall-out, but during this migration season hurricanes passed extraordinarily far to the east, well east of Bermuda in fact (Lawrence 1977), and missed both migration routes and shipping lanes.

Those vagrants whose arrival was apparently unrelated to meteorological factors were considered to be ship-assisted or present for some time before being recorded. Many were from north and east Britain, and no particular species could be singled out.

SPRING Spring vagrants appeared between late March and early June, but mainly in the first two weeks of May. Little relationship with the synoptic situation was detected, despite the occurrence of suitable wave depressions, and many were recorded during or after blocking situations.

THE 1975 AND 1976 FALLS During the most recent periods of vagrancy, the main westerly flow lay farther south than normal, and ideal conditions for fast-moving wave depressions were present in four discrete spells. The most probable trajectories of vagrants are described in the following account.

September 1975 A cold front moved south-eastwards off the eastern USA on 22nd, and persisted as a waving feature between Nova Scotia and Bermuda until 26th. Its passage over New England and Delaware on 22nd initiated a major wave of migrants (DeBenedictis 1976), but it subsequently held up normal migration as it retrogressed slightly as a warm front. During the period, two depressions and a wave ran quickly east (fig. 2). A Tennessee Warbler on Fair Isle on 24th had probably crossed rapidly in the strong flow, overtaking the first of the warm fronts off Ireland early on that date, and moving quickly NNE ahead of the front. On 23rd, hurricane 'Eloise', moving northwards into western Florida, pushed warm southerlies into the eastern USA and rejuvenated the slow-moving front. It provided theoretically ideal conditions for reversed passage. Extensive cloud and rain covered the coast between 38°N and 50°N, with birds possibly departing as far south as 35°N, and a Red-eyed Vireo reached Bardsey on 25th in the

strong westerlies. A Yellow-bellied Sapsucker in Scilly on 26th was possibly of a more northerly origin, and could have passed south into the frontal wind flow from a weak ridge which developed over Nova Scotia late on 24th. A Rose-breasted Grosbeak was recorded in the Channel Islands, also on 26th. The wave with which these last two vagrants may have been associated deepened and arrived in Biscay on 26th, by which time the two birds would have overtaken the warm front to move NNE into the southwestern approaches. This wave depression also probably brought a Black-and-white Warbler and a Scarlet Tanager to Scilly on 27th and 28th respectively, after initial reversed passage on 24th or 25th. Between 27th and 29th, a huge migration was recorded over New Jersey and the mid Atlantic coast as the frontal system finally cleared the area from the northwest (DeBenedictis 1976), and no further vagrants were recorded in Britain until 9th October.

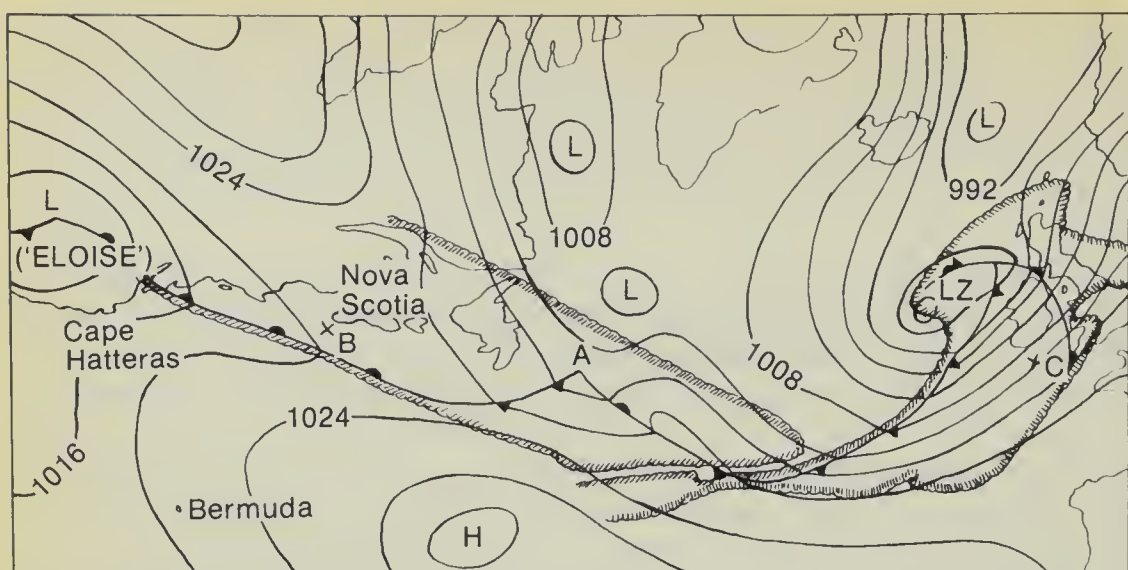


Fig. 2. Synoptic chart for 12.00 GMT on 24th September 1975. B and C show the positions of frontal wave A at 00.00 GMT on 24th September and 06.00 on 25th September respectively. Hatched lines enclose areas of deep frontal cloud associated with wave A and low Z as seen by meteorological satellite

October 1976 The first period in which a waving frontal zone affected the Atlantic in mid latitudes was from 1st to 6th, during which three waves or depressions crossed to Britain (fig. 3). On 30th September, a cold front moved south over Nova Scotia to lie slow-moving along 43°N by 2nd. The first of many arrivals in Britain—two Blackpoll Warblers in Scilly on 4th—probably arrived on 2nd or 3rd. On 3rd, two shallow waves moved east, south of Nova Scotia, and deepened. The strong westerly warm sector which arrived on 5th doubtless brought the Blackpoll and Yellow-rumped Warblers

recorded in southern Ireland on 6th and 7th, three or four more Blackpoll Warblers in Scilly and on Bardsey on 7th, and a further Blackpoll Warbler in Scilly on 9th; all probably arrived on 5th or 6th. Although a further warm sector crossed the Atlantic between 7th and 9th, trajectories showed that it was unlikely to have brought any vagrants.

The next favourable situation occurred after 12th, when a warm sector moved southeastwards towards Spain, with the cold front trailing south towards Bermuda. A wave developed northeast of this island early

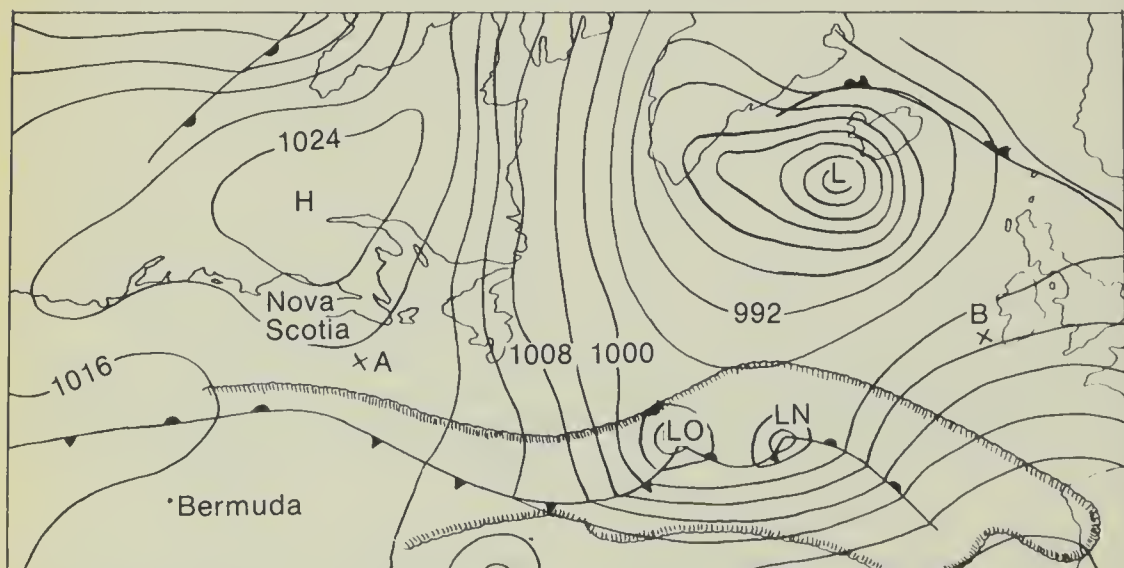


Fig. 3. Synoptic chart for 12.00 GMT on 4th October 1976. A shows the position of low O at 12.00 GMT on 3rd October. B shows the position of low N at 06.00 on 5th October. Hatched line encloses area of deep frontal cloud associated with lows N and O

on 12th, deepened, and moved rapidly to arrive in southwest Britain on 14th. That day, a Blackpoll Warbler, a Grey-cheeked Thrush and a dead Common Nighthawk were recorded in Scilly, with two more Grey-cheeked Thrushes on 15th, another with a Rose-breasted Grosbeak on 16th, and an American Robin on 17th.

The last waving front of the month lay

across the western Atlantic from 16th to 18th. Two associated depressions crossed quickly between 18th and 20th, and in Scilly another Blackpoll Warbler, another Rose-breasted Grosbeak and yet one more Grey-cheeked Thrush were recorded on 20th-21st, and a Common Nighthawk which had been dead for some time was found on 25th.

Discussion

Although a satisfactory relationship with synoptic situations was apparent, the possibility of ship-assisted crossings could not be entirely eliminated, as an individual bird may be partly or wholly assisted at any point during its crossing. Durand (1972) listed many autumn migrants landing on ships as far east as 40°W, and described instances of birds leaving ships at all points on a crossing, often after changes in wind direction relative to the ship. There is no certainty, therefore, that some apparently wind-assisted vagrants had not been ship-assisted, but it is thought that, at most, only a small minority were incorrectly attributed.

Much of the autumn vagrancy in Britain arises well after the peak migration period in North America (Nisbet 1963a), especially for such species as Grey-cheeked Thrush, Rose-breasted Grosbeak and Bobolink. Together with the fact that the main autumn passage over the West Indies does not take place until after mid September, this may imply that earlier autumn migrants use a more western route with less risk of displacement. We have also seen that cloud cover over the route is less in September. The only September fall was in 1975, during the last week of the month. In September 1974, conditions apparently suitable for transatlantic crossings arose on several occasions, but all in the first three weeks of the month, and only one vagrant was recorded.

The influx of Blackpoll Warblers in 1976 was without precedent. While one or two could have been ship-borne, especially as Durand (1972) recorded them frequently on shipping, they all arrived with species such as Common Nighthawk and Grey-cheeked Thrush, which Durand did not list.

Chandler S. Robbins has pointed out (*in litt.*) that, as the Blackpoll is an abundant long-distance migrant late in the season, it is surprising that such falls have not occurred before. Ratcliffe (1977), however, showed that the atmospheric circulation just before this particular autumn had been extremely abnormal, resulting in the exceptionally prolonged drought in Britain. This drought ended quite abruptly when the Atlantic jet stream shifted suddenly southwards from its extreme northern position. Both this shift and the conditions produced by the drought itself contributed to the unusually vigorous synoptic patterns of September and October 1976, which were particularly well suited to vagrancy in the latter month. Thus, it can be reasonably assumed that only in such an exceptional atmospheric situation could a similarly large fall occur.

There appears to be a distinct divergence in the origins of vagrants in different years. In the Octobers of 1968 and 1976, over 60% of the vagrants

were three northern species: Grey-cheeked Thrush, Yellow-rumped Warbler and Blackpoll Warbler. In contrast, October 1967 saw none of these, but 55% were two species which also breed well south in America: Red-eyed Vireo and Northern Oriole. This suggests two separate synoptic types over the migration routes: one conducive to reversed migration of more southerly species, such as Nisbet (1963a) found; and the other a situation affecting normal migration, where the predominant species are from northern breeding grounds on southward passage over the sea, and typically illustrated in fig. 3. Owing to the greater density of this normal passage, a larger number of vagrants is likely in association with the latter type.

It is of interest to note that an unprecedented immigration of American monarch butterflies *Danaus plexippus* in early October 1968, and also occasional records of an American moth, *Phytometra biloba*, were attributed by Burton & French (1969) and Hurst (1969) respectively to strong warm-sector flows similar to those bringing vagrant birds. Further unpublished studies by Hurst have shown that, over the years, September flights of monarchs originated between New England and Labrador, and were carried to Britain almost entirely in warm sectors.

The only species recorded regularly in winter in the last 30 years was the American Robin (table 1), which differs from most other vagrants in being both a long-distance migrant and a resident, with a large gregarious winter population in southeastern USA. If any movement should take place in winter, as in cold weather, there is a risk of birds being swept eastwards from the area into developing wave depressions. In January, the mean axis of the strongest wind flow at 3,000 m (9,800 feet), below which fast-moving waves are generally found, lies at 38°N over the extreme western Atlantic, and it has already been established that there is a high winter rate of cyclogenesis in this area.

Although wave depressions cross the Atlantic less frequently and with lower intensity in spring than in autumn, the mostly overland passage in North America must be one of the deciding factors determining the lack of vagrancy. April and May are the most cloud-free months of the year along coastal USA, with a mean of only 2/8 cover south of 39°N (US Air Force *et al.* 1971). In April, a relatively cloud-free zone extends northwards along the coast as far as Nova Scotia, and it would appear that migrants using the coastal route not only avoid possible displacement over the sea, but are also able to take advantage of the clearer skies. Table 1 shows the predominance of American sparrows and Slate-coloured Juncos, and Nisbet (1963a) considered spring vagrants to be primarily ship-assisted. As almost half of the spring vagrants during 1967-76, however, were recorded in northern Scotland, compared with less than 10% in autumn, ship-assistance does not appear to be a satisfactory answer to the problem, and the mechanism by which these birds cross the Atlantic must remain inconclusive.

Fig. 4 and table 1 demonstrate that the number of autumn records has increased dramatically since the 1950s, and the number of species has also risen steadily. One contribution towards this increase has undoubtedly been observers' heightened awareness and improvement in identification abilities. Furthermore, changes in breeding populations may have caused

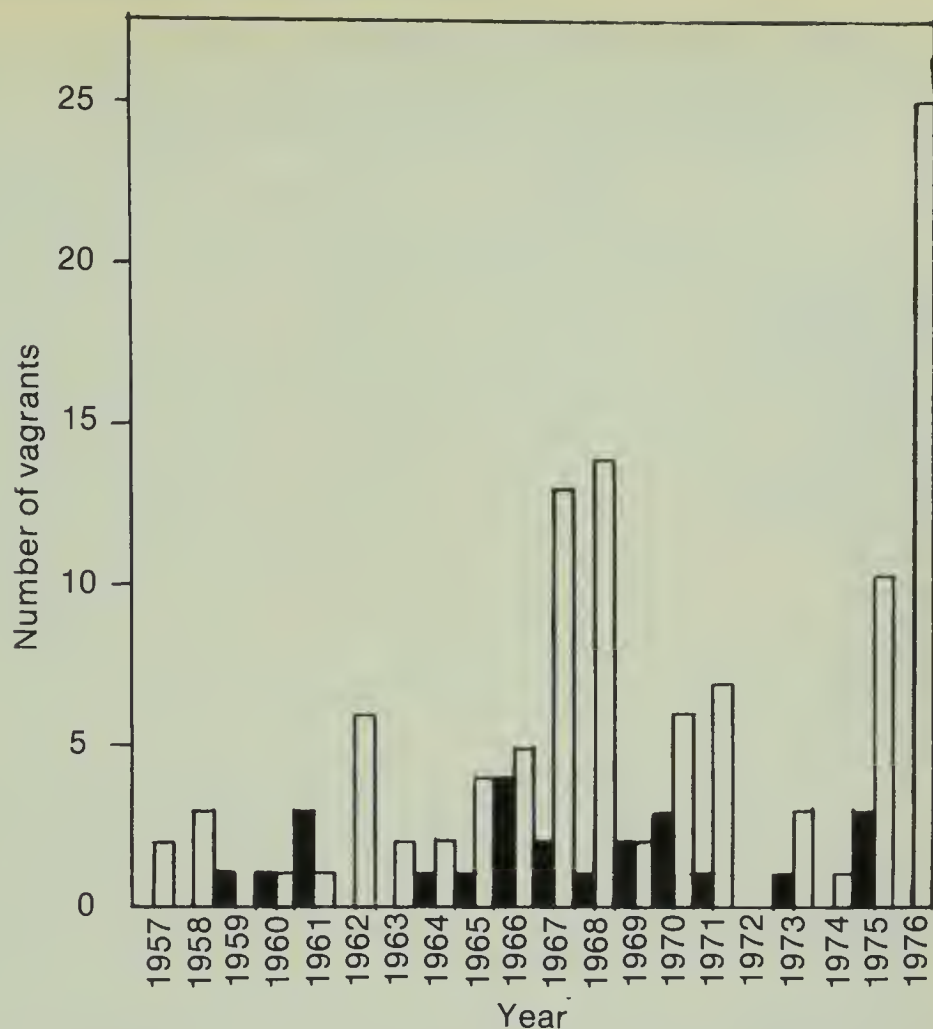


Fig. 4. Spring and autumn occurrences of Nearctic landbirds in Britain and Ireland, 1957-76. Spring (March to June), filled columns; autumn (August to November), open columns

fluctuations in the magnitude and composition of migration. Williamson (1963) postulated that high populations give rise to abnormal movements of both adult and young birds, with those of the latter being random pioneering movements. Only a quarter of the autumn vagrants during 1967-76 were aged, and, of these, 90% were first-years, perhaps partly on random post-juvenile dispersal and partly less able than adults to re-determine their heading after disorientation. Sharrock (1976) drew attention to some species' vagrancy patterns showing periodic fluctuations, and quoted the American Robin as one such species.

Williamson (1975) also related the increase to climatic change, although research in this subject has been concerned mainly with annual or winter changes, and vagrancy is primarily an autumn phenomenon. He believed the increase in records to be due to a shorter, more direct, crossing made possible by a southward shift in Atlantic storm tracks, although it is difficult to see how distance could be reduced in this case. Such a southward movement was established by Dickson & Namias (1976) for the winter period during the 1960s, when there was a general cooling of the atmosphere, but this was accompanied by a weakening of the Atlantic westerlies due to excessive blocking (Painting 1977), and there is no evidence of a

Species	1947-56			1957-66			1967-76		
	S	A	W	S	A	W	S	A	W
Rufous-sided Towhee									
<i>Pipilo erythrophthalmus</i>			1						
Fox Sparrow									
<i>Zonotrichia iliaca</i>			1						
Song Sparrow									
<i>Z. melodia</i>			2				2		
White-throated Sparrow									
<i>Z. albicollis</i>			3				3	4	
Slate-coloured Junco									
<i>Junco hyemalis</i>			2				4		
Rose-breasted Grosbeak									
<i>Pheucticus ludovicianus</i>					3			3	1
Bobolink									
<i>Dolichonyx oryzivorus</i>					1			5	
Northern Oriole									
<i>Icterus galbula</i>					4		2	6	

parallel climatic change in autumn. We have seen, however, that, in good vagrant years, westerlies have indeed been farther south than normal off eastern North America. In September and October, the mean axis of the strongest 3,000-m (9,800-foot) wind flow lies at its farthest north over the Atlantic, stretching from the Gulf of St Lawrence eastwards to mid Atlantic and thence northeastwards to Scotland. The direction of migration in late autumn suggests that long-distance migrants have adapted to selecting suitable following winds in order to make the fastest possible passage over the sea to their wintering grounds. Late autumn is ideal for three meteorological reasons:

- (i) The extreme northerly position of the strong upper westerlies
- (ii) The relatively low incidence of cyclogenesis over the Gulf Stream boundary compared with winter
- (iii) The rapidly decreasing incidence of tropical storms

It is only in seasons in which these factors are abnormal that a major risk to migration is posed. The satellite cloud data discussed previously were based on the years 1967-70, which included two of the most significant autumns for vagrants, and, therefore, the cloudy areas may have been more extensive than normal.

In the early 1970s, winter temperatures in eastern USA began normally, then were abnormally mild from 1971/72 to 1975/76, and the general atmospheric circulation strengthened, markedly so in winter. Painting (1977), however, found that, in autumn, there was little rise in temperature, and westerlies actually decreased. He showed that, in September and October, there was a marked increase in the frequency of blocking anti-cyclones during 1970-74, with an anticyclonic anomaly west of Ireland where pressures were fully 6 mb higher than in the 1960s. This may account for the dearth of vagrants in this period, when fewer than four were recorded per autumn, compared with over seven per autumn during 1965-69 (fig. 4). A similar, but less marked phenomenon was evident in spring.

It appears, therefore, that vagrancy is affected considerably by short-term climatic fluctuations, but, as all climatic variations are both complex and imperfectly understood, caution must be exercised when relating vagrancy to long-term changes. A much longer period of consistent recording will be necessary before any firm conclusions can be drawn.

Acknowledgements

I am very grateful to the Meteorological Office for permission to publish synoptic charts and satellite analyses, and for providing references. I also wish to thank R. H. Dennis and my colleagues N. Annis and L. Dent for comments.

Summary

Records of Nearctic landbirds in Britain and Ireland during recent years are analysed in a meteorological context, and the theoretical considerations are discussed in detail. The analysis showed that, although the mechanism of transatlantic crossing remains speculative in some cases, there is a definite relationship of vagrancy to the strong west to southwest winds of warm sectors. Disorientation of migrants is thought to occur in association with frontal zones, but only those generating fast eastward-moving waves aid multiple crossings. Most of these crossings are probably initiated over the sea between Nova Scotia, Cape Hatteras and Bermuda, where the majority of vagrants are displaced while on normal southward migration. In certain situations, some may be displaced while undergoing random dispersal or reversed passage at latitudes between 35°N and 50°N.

Ship-borne vagrants displaced by tropical and other storms are known to reach Europe, but tropical storms played only a minimal role during the analysis period, and there is no evidence that they can contribute directly to wind-assisted crossings except rarely in their extra-tropical stages.

Records of vagrants tend to occur after peak migration periods in North America, and this may imply a more eastern route taken by the later long-distance migrants.

Changes in the numbers and variety of vagrants can be linked partly with short-term climatic variation, but any apparent relationship with long-term variation must be treated with caution.

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Postscript

Since the above analysis was carried out, four Nearctic passerines were recorded in Britain between 15th and 22nd May 1977. Although these followed the normal pattern of occurrence during an anticyclonic period in northern Britain, anomalous conditions over their migration route earlier in the month were conducive to the initiation of transatlantic passage. On 8th and 9th May, an active and waving cold front stretched from northern Florida ENE past Bermuda, with the cold air mass to the north giving record low May temperatures in the Carolinas. A strong WSW airflow on the front's southern flank, both near the surface and at upper levels, extended to Britain in the next two days. It seems highly likely that coastal migrants over Florida could have been carried across the ocean to make landfall on 10th or 11th in the manner previously described for reversed migrants in autumn. If this was the case, their puzzling appearance in the north rather than the southwest may indicate onward passage in their preferred direction, although this presupposes an element of recovery of energy after the 6,000-km crossing. There is no evidence, statistical or otherwise, that spring vagrants may be individuals which have overwintered from the previous autumn.

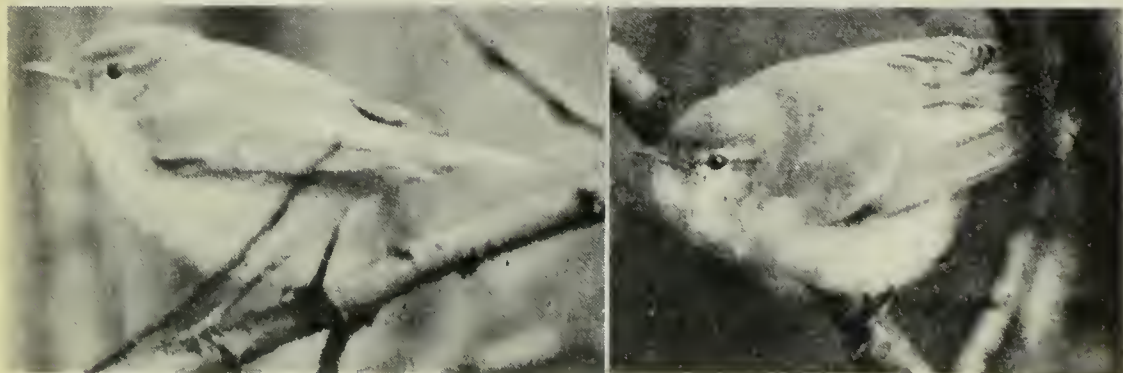
Mystery photographs

33 Taking full field notes of an unusual bird is very important; in groups such as the medium-sized and larger raptors, observation should be concentrated on shape, silhouette and flight action as much as plumage pattern, since the latter varies so much individually and with age. In Britain, we have few species to worry us, but in recent years many birdwatchers have been making pilgrimages abroad to famous raptor-migration observation points. It is at such places that the tremendous plumage variations within some species can be really appreciated and observers become aware of the pitfalls of relying too heavily on conventional field guides to sort out the identification of an unusual individual.

The bird depicted in plate 204 and repeated here is a pitfall bird. The silhouette, however, indicates that it is a medium-sized raptor and the notched tail suggests a species of kite *Milvus*; the shallowness of the notch matches a picture-book Black Kite *M. migrans*. On the other hand, there is little here of the 'feel' of a Black Kite: the tiny, pointed head on a slender neck looks wrong, but would be right for a Honey Buzzard *Pernis apivorus*. The bird is obviously in moult, as the inner primaries on both wings are missing, and incompletely regrown central tail feathers would give a notched effect, particularly when the tail was closed.

The bird in question was photographed by D. Russell in Banff on 14th July 1974 as an unidentified raptor; eventually, the photograph was submitted to the Rarities Committee, provisionally as a Black Kite. Six members of the Committee consider that it was a moulting Honey Buzzard; four members and an expert referee consider that it is not possible to determine whether it was a Black Kite or a Honey Buzzard. Single photographs of raptors can make specific identification difficult; thus, this bird remains a genuine mystery. It has been included to demonstrate the difficulties involved in the identification of some individual raptors, and to show the importance of taking full field notes of any unusual sighting.

S. C. MADGE



209 & 210. Mystery photographs 34. Identify the species. Answer next month

Notes

Great Skua killing Sooty Shearwater During August and the first half of September 1977, passage of Sooty Shearwaters *Puffinus griseus* off Cape Clear Island, Co. Cork, was well above normal. Consequently, they and Great Skuas *Stercorarius skua* were often noted moving west together. I made several observations, and there were frequent reports, of Great Skuas apparently specifically selecting Sooty Shearwaters for harrassment. The skuas moved up to 400 m from the optimum line of westerly progress, flying over and ignoring other seabirds, which at least once included a Great Shearwater *P. gravis*. In early September, a Sooty Shearwater appeared out of the fog, closely pursued by a Great Skua. The shearwater landed on the water and immediately dived. Twice the skua attempted to land on it as it resurfaced, but failed. Although on previous occasions this had been enough for the skua to lose interest, this time it was mobbed very attentively by an adult Great Black-backed Gull *Larus marinus*. Meanwhile, the shearwater took off, but the skua noticed and immediately continued its pursuit; the gull returned to land. After two more diving/resurfacing incidents, the third resurfacing coincided with the skua's plunge and a struggle took place on the water. After about 20 seconds, the skua flew and landed about 30 m away, before flying off west. The Sooty Shearwater was reduced to an inert mass on the surface of the water; after ten minutes, the current drifted it away into the fog.



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R. W. Furness has commented: 'It is not certain that the shearwater was not killed by the Great Skua for food, since the reason why the skua flew away is unclear. Sooty Shearwater has been recorded as being killed and eaten by Great Skua (see *Ibis* 121: 86-92). The lack of quantitative data prevents the conclusion being drawn that the skua was specifically selecting Sooty Shearwaters for harrassment.' More information on the percentages of passing seabird species seen to be chased by others, and the outcome of such events, might prove interesting.

EDS

Black-headed Gulls spinning on water to take hoverflies from the air

On 29th August 1977, in a kayak about 100 m offshore near Bembridge, Isle of Wight, I saw five or six Black-headed Gulls *Larus ridibundus* spinning on the water like Red-necked Phalaropes *Phalaropus lobatus*. Moving closer, I found that they were also stretching their necks upwards to snatch aerial prey. I approached even closer and identified the prey as hoverflies (Syrphidae), which were migrating westwards in a thick band about 25-30 cm above the surface. I did not see the gulls take any food from the water surface, and the spinning appeared to be a manoeuvre to enable them to catch the aerial insects. When I left, half an hour later, the gulls were still profiting from this unexpected food supply.

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Long-eared and other owls taking Moorhens On the morning of 5th January 1978, at a winter roost of Long-eared Owls *Asio otus* near Mattersey, north Nottinghamshire, I picked up a very large and misshapen pellet intact among fragments and a few smaller pellets of this species. It measured 71 mm × 26 mm (average measurements of Long-eared Owl pellets being 46.1 mm × 21.6 mm). At home, I analysed the pellet and found that it contained the skull and much of the skeleton of a wood mouse or yellow-necked mouse *Apodemus* and the skull and upper mandible of a Moorhen *Gallinula chloropus* (fragments of bone and feathers were presumably also of this latter species). As adult Moorhens weigh on average between 326 g and 400 g, and Long-eared Owls from 285 g to 345 g, one has to assume that the predator killed and then ate its prey on the spot (although, in 1963, I found the partly eaten remains of an adult Moorhen in a Long-eared Owl's nest 6 m above the ground). At the 1978 roost, I found no evidence that the prey had been taken to the site, but this does not preclude the possibility.

Between 1966 and 1974, at a traditional Barn Owl *Tyto alba* site in the roof of a disused brickworks shed at Misterton, north Nottinghamshire, adult and juvenile Moorhens were occasionally killed by one or both adult owls. Ralph Wood, who lives not 50 m away, told me that the owls killed on average two Moorhens each year when they had young in the nest; one evening in 1969, before dusk, while the female Barn Owl was brooding small young, the male brought an adult and two half-grown Moorhens to the nest: it appeared to have no difficulty in carrying the remains of the adult.

Having searched the literature, I found reports of Moorhens being taken only by the Eagle Owl *Bubo bubo* and the Snowy Owl *Nyctea scandiaca*. The Tawny Owl *Strix aluco* is, however, quite capable of killing large birds, and may occasionally take Moorhens; I once found a small Moorhen chick discarded beside a nest of Short-eared Owls *A. flammeus*, but have no evidence of this species taking adult Moorhens.

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Head-pattern of Hippolais warblers PRC has studied skins of *Hippolais* warblers at the British Museum (Natural History), Tring, in particular to examine their head-patterns. His findings are relevant to recent notes and correspondence on this subject (*Brit. Birds* 71: 132, 546; 72: 82), and his notes and sketches form the basis for the following summary and fig. 1.

Upcher's Warbler *H. languida*: facial pattern similar to Melodious *H. polyglotta* and Icterine Warblers *H. icterina*, but supercilium and lores whitish, thus perhaps more conspicuous in field.

Olivaceous Warbler *H. pallida*: facial pattern similar to Melodious and Icterine Warblers but supercilium and lores washed buff.

Booted Warbler *H. caligata*: skins and two recent photographs (70: plate 116; 71: plate 201) show defined, rather thin dark line between eye and bill, continuing more diffusely behind eye. Supercilium fairly pronounced, and—unlike any other *Hippolais*—extending for same distance behind eye as in front, but shorter than on Willow Warbler *Phylloscopus trochilus*. Bill in profile rather fine and compact, recalling *Phylloscopus* rather than *Hippolais*, although, when viewed head-on or from below, wider base may be apparent.

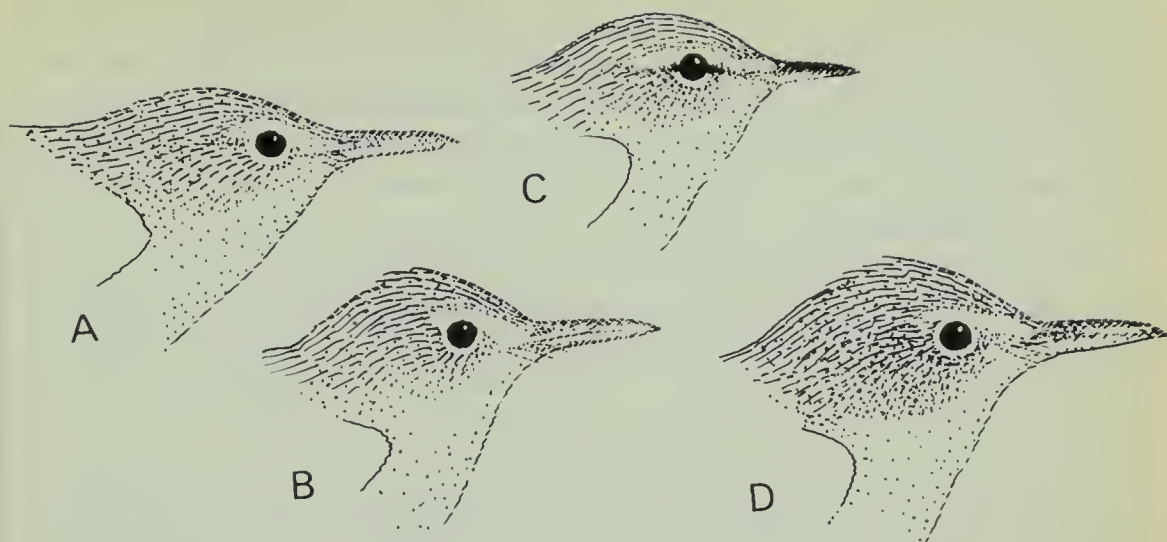


Fig. 1. Head-patterns of four *Hippolais* warblers. A Olivaceous Warbler *H. pallida*; B Upcher's Warbler *H. languida*; C Booted Warbler *H. caligata*; D Olive-tree Warbler *H. olivetorum* (P. J. Grant, after P. R. Colston)

Olive-tree Warbler *H. olivetorum*: darkest head among *Hippolais*, with pale greyish-buff loreal patch; generally dark greyish ear-coverts and sides of head give rather 'hooded' appearance.

Although Booted Warbler does not have a pronounced dark eye-stripe, unlike most *Phylloscopus* warblers, it would seem likely that at least it does not always show the striking 'bare-face' expression of at least four other members of its genus.

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Identification of Booted Warbler In autumn 1977, in Shetland, I was able to observe two immature Booted Warblers *Hippolais caligata*: one on Fair Isle during 20th-27th August and one on Whalsay from 27th September to 4th October (*Brit. Birds* 71: 520-521). My notes on these two may help other observers to distinguish this reputedly difficult species from other warblers.

In general appearance, both were small, pot-bellied, long-tailed and very pale, with a striking contrast between upper- and underparts. Their flattened, angled foreheads, long bills and very short undertail-coverts were typical of *Hippolais*, but their generally fine proportions and facial expression were quite distinctive: basically *Phylloscopus*-like. The crown, nape, mantle and ear-coverts of the Fair Isle individual, in apparent fresh plumage, were pale 'milky tea' in colour, with a fresh olive tint. The Whalsay individual, which was slightly less striking in appearance, looked even paler, almost sandy, above. The underparts of both appeared gleaming white, contrasting with the upperparts; on the Whalsay bird there was a slight buffy suffusion on the vent and flanks. An indistinct dark eyestripe and a long, whitish—but again indistinct—supercilium lent both a 'pretty face' appearance. The wings, which extended just to the base of the tail, were slightly darker than the mantle, with clear, pale edgings to the primaries and tertials visible in the field. Both had noticeably long tails (particularly obvious in flight), very slightly darker than the mantle and, in

some lights, showing a reddish tinge; on the Fair Isle individual, there were conspicuous whitish outer tail feathers, but these were indistinct on the Whalsay Booted. Their bills were orangey-flesh, with a dark tip, and long and fine: 16.5 mm on the Fair Isle bird and 13 mm on the Whalsay one. Their thin legs were bluey-flesh, paler around the feet. Both individuals were no bigger than a Chiffchaff *P. collybita*, and the Whalsay one was possibly even smaller.

Their actions were bold, but fine, sometimes *Acrocephalus*-like, but more often like a *Phylloscopus*; the flight was weak, and low over the ground. Generally, both Booted Warblers rather reminded me of a pale *Phylloscopus*, particularly Bonelli's Warbler *P. bonelli*, while, at a distance, they even recalled Lesser Whitethroat *Sylvia curruca*, as the browns became grey and the shaded ear-coverts appeared clear-cut and strangely dark. Altogether, the long tail, the facial expression and the generally fine proportions make the Booted Warbler a very pretty and dainty *Hippolais*. All observers who saw these two birds with me agreed that they were striking and readily identifiable.

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Letters

Peregrine's method of killing prey I read with interest the note on how a Peregrine *Falco peregrinus* took a Meadow Pipit *Anthus pratensis*, and the accompanying editorial comment (*Brit. Birds* 71: 37-38). I must say that I thought J. Walpole-Bond (quoted in the aforementioned comment) was talking absolute rubbish. I have seen quite a few Peregrine kills, but none in which the prey has been flying in the opposite direction to the predator at the moment of impact. So far as I know, a victim is always carried with its body roughly parallel to and facing the same way as that of the Peregrine. If both were travelling in opposite directions, the speed at the point of impact would be the sum of their individual speeds; whereas, if they were going in the same direction, it would be only the difference. I have watched trained Goshawks *Accipiter gentilis* kill at close range: when faced with a head-on flight, they fly straight upwards, as if to loop the loop, and grab the victim from underneath, both birds travelling in the same direction on impact.

In 1978, I saw nine kills by a wild Peregrine: four times the predator came up from underneath and into a party of pigeons *Columba*. The whole sequence takes place so quickly that it is almost impossible to see what actually happens; at one moment the Peregrine is shooting vertically upwards; then there is a jumble of wings and feathers; and then the pigeon can be seen in the Peregrine's talons, with its tail under that of the predator, and often still flapping madly. What does happen, I believe, is that the Peregrine comes straight up and switches or rolls on to its back at the last moment. Incidentally, a food pass between a male and female Peregrine is much the same action.

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Winter range of Tawny Pipit In *British Birds* (71: 247), the range of the Tawny Pipit *Anthus campestris* was cited by I. J. Ferguson-Lees as 'winters . . . east to Afghanistan'. I draw your attention to the range given by Salim Ali and S. Dillon Ripley, in *The Handbook of the Birds of India and Pakistan* (vol. 9, p. 256): 'Winter visitor, widespread and locally very common. Pakistan from Kohat and Punjab south through Sind and Baluchistan, and the greater part of the Indian Peninsula east to the Brahmaputra River in Bangladesh and south to Londa near Belgaum and the Kolar district, extreme Southeastern Karnataka.' The species certainly occurs in West Bengal in winter, where I saw several during the three years I spent there.

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This was a careless slip. My paper was concerned primarily with European pipits and, as a result, I quoted the winter range of only the nominate race of the Tawny; since, however, I was referring to the species as a whole in that particular context, I should also have included the winter distribution of the eastern subspecies *A. c. griseus*. IJF-L.

Announcements

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 Dorset Bird Club
 Durham Bird Club
 East Lancashire Ornithologists' Club
 East Sutherland Bird Club
 Essex Birdwatching & Preservation Soc.
 Filey Brigg Ornithological Group
 Gloucestershire Naturalists' Society
 Gower Ornithological Society
 Great Yarmouth Naturalists' Society
 Gwent Ornithological Society
 Hale Ornithologists
 Hampshire Field Club
 Harrogate & District Naturalists' Society
 Herefordshire Ornithological Club
 Hertfordshire Natural History Society
 Huddersfield Birdwatchers' Club
 Huntingdonshire Fauna & Flora Society
 Hyndburn Ornithological Club
 Irish Wildbird Conservancy
 Isle of Wight Nat. Hist. & Arch. Soc.
 Kendal Natural History Society
 Kent Ornithological Society
 Knutsford Ornithological Society
 Lancaster & District Birdwatching Society
 Lancaster University Bird and Wildlife Soc.
 Leeds Birdwatchers' Club
 Leicestershire & Rutland Orn. Soc.
 Leigh Ornithological Society
 Lincolnshire Naturalists' Union
 London Natural History Society
 Lowestoft & Northeast Suffolk Field
 Naturalists' Club
 Manchester Ornithological Society
 Manx Ornithological Society
 Merseyside Naturalists' Association
 Mid-Cheshire Ornithological Society
 Middle Thames Natural History Society
 Norfolk & Norwich Naturalists' Society
 Norfolk Naturalists' Trust
 Norfolk Ornithologists' Association
 Northamptonshire Bird Club
 North Down Ringing Group
 Northern Ireland Ornithologists' Club
 Oxford Ornithological Society
 Penrith & District Nat. Hist. Soc.
 Perthshire Society of Natural Science
 Portland Bird Observatory
 Preston (Scientific) Society
 Reading Ornithological Club
 Rotherham & District Orn. Soc.
 Royal Society for the Protection of Birds
 Sandwich Bay Bird Observatory
 Scarborough Field Naturalists' Society
 Scottish Ornithologists' Club
 Sheffield Bird Study Group
 Shetland Bird Club
 Shoreham Ornithological Society
 Shropshire Ornithological Society
 Société Jersiaise
 Somerset Ornithological Society
 South East Cheshire Orn. Soc.
 Suffolk Ornithologists' Group
 Surbiton & District Birdwatching Soc.
 Surrey Bird Club
 Sussex Ornithological Society
 Swinton & District Naturalist Society
 Teesmouth Bird Club
 Trent Valley Birdwatchers
 Tyneside Bird Club
 Wakefield Naturalists' Society
 West Midlands Bird Club
 West Wales Naturalists' Trust
 Wilmslow Guild Ornithological Society
 Wiltshire Ornithological Society
 Wren Conservation Group
 York Ornithological Club
 Yorkshire Naturalists' Union

Letter-codes for use in British breeding bird atlas recording The European Ornithological Atlas Committee has established a standard series of 17 categories of breeding evidence (numbered from 0 to 16) for use in breeding bird surveys. To facilitate ease of use in recording, the EOAC also recommends that each country should adopt a series of letters to correspond to the 17 numbers (experience has shown that letter-codes become part of observers' vocabularies in the course of atlas fieldwork). The following list of letter-codes (which incorporates the smallest possible number of changes from those used in the 1968-72 survey) is recommended by the Populations and Surveys Committee of the British Trust for Ornithology.

Grade A	Present
O 0	Species OBSERVED in breeding season

Grade B Possibly breeding

- H 1 Species observed in breeding season in possible nesting HABITAT
 S 2 SINGING male(s) present (or breeding calls heard) in the breeding season

Grade C Probably breeding

- P 3 PAIR observed in suitable nesting habitat in breeding season
 T 4 Permanent TERRITORY presumed through registration of territorial behaviour (song, etc.) on at least two different days a week or more apart at the same place
 D 5 DISPLAY and courtship
 N 6 Visiting probable NEST-SITE
 A 7 AGITATED behaviour or ANXIETY calls from adults
 I 8 Brood patch on adult examined in the hand, indicating probably INCUBATING
 B 9 BUILDING nest or excavating nest-hole

Grade D Confirmed breeding

- DD 10 DISTRACTION DISPLAY or injury feigning
 UN 11 USED NEST or egg shells found (occupied or laid within period of survey)
 FL 12 Recently FLEDGED young (nidicolous species) or downy young (nidifugous species).
 ON 13 Adults entering or leaving nest-site in circumstances indicating OCCUPIED NEST (including high nests or nest-holes, the contents of which cannot be seen) or adults seen sitting on the nest
 FY 14 Adults carrying FOOD for YOUNG or faecal sac
 NE 15 NEST containing EGGS
 NY 16 NEST with YOUNG seen or heard

It will be noted that, to distinguish them instantly from the others, the codes for confirmed breeding (grade D) all consist of two letters.

J. T. R. SHARROCK

Chairman, European Ornithological Atlas Committee, c/o Fountains, Park Lane, Blunham, Bedford MK44 3NJ

The Richard Richardson Award Fund The late R. A. Richardson was the friend of hundreds of birdwatchers who visited north Norfolk and, especially, his favourite haunt, the East Bank at Cley. He always found time to chat, to expert and beginner alike, but young birdwatchers were invariably given special help. A fund has now been established to maintain an annual award to young bird-illustrators (see pages 46, 191-192 and 403-409). The trustees of this fund are members of the editorial board of *British Birds*: P. J. Grant, M. A. Ogilvie and Dr J. T. R. Sharrock.

Anyone who wishes to remember Richard by contributing to this fund should send their cheque or postal order, made payable to 'The Richard Richardson Award Fund, account number 7014936', to Dr J. T. R. Sharrock, Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

YOC membership as a Christmas gift Do you know any young bird-watchers under the age of 15 who are not yet members of the Young

Ornithologists' Club? The editorial board of *British Birds* recommends membership of the YOC as a means by which young birdwatchers can be guided to become useful and responsible ornithologists; there are close links between the YOC and *BB*. The Club produces an attractive, readable bi-monthly colour magazine, *Bird Life*, and arranges competitions, projects and residential courses, as well as running local birdwatching groups. Anyone interested may obtain a free copy of *Bird Life* and details of gift membership by writing to Peter Holden, YOC, The Lodge, Sandy, Bedfordshire SG19 2DL.

Requests

Colour-marked Greenland White-fronted Geese The Greenland White-fronted Goose Study group is planning to mark birds of the race *Anser albifrons flavirostris* on the west coast of Greenland with large-numbered, white Darvic rings in summer 1979. Sight records are wanted, giving the serial number of the Darvic ring, which can be read through a telescope, the date and the locality. Other details (adult, immature, pair, family size, flock size) would also be useful. The serial number of the ring (letter-digit-digit) should be carefully checked; the initial letter falls nearest the lower end of the tarsus. This subspecies winters in Ireland, Scotland and Wales, with occasional records in eastern North America. Observers in all parts of the range are asked to scan flocks for marked birds. Details of all sightings should be sent to P. J. Belman, 107 Grange Road, Ealing, London W5 3PH.

Colour-marked seabirds of Oman To attempt to trace their post-breeding dispersal and to relate this to the geographical distribution of the ticks that parasitise them, seabirds, mainly gulls (Laridae) and terns (Sternidae), and Crab Plovers *Dromas ardeola* were ringed, colour-ringed and colour-marked on Masirah Island, Oman, in July and August 1979. Reports of sightings of any colour-ringed or colour-marked seabirds in the Indian Ocean region will be gratefully received and acknowledged by M. D. Gallagher, PO Box 246, Muscat, Sultanate of Oman, and Dr C. J. Feare, Greenfields, The Street, Ewhurst, Surrey, England.

News and comment

Peter Conder and Mike Everett

Eric Hosking's 50 years ago... On 2nd October—his seventieth birthday—a selection of Eric Hosking's photographs will go on exhibition at the Kodak Galleries in High Holborn. The exhibition, to mark Eric's 50 years as a bird-photographer, will be opened by David Attenborough. There are also plans to commemorate this achievement by a 30-minute BBC film of his life (Eric is looking forward to being interviewed by Angela Rippon), a four-page feature in *The Observer* colour supplement and the publication by Pelham Books of a collection of 285 of his photographs (80 in colour) in a book entitled *Eric Hosking's Birds* (he disclaims responsibility for the title), costing £10.50. For 16½ years, until July 1976, Eric was photographic

editor of *British Birds* and he continues to help us in many ways, including acting as one of the judges for 'Bird Photograph of the Year' and 'Best recent black-and-white photographs'. We are delighted to add our congratulations to the honours noted above and to announce that, to mark this noteworthy anniversary, the cover of the October issue of *British Birds* will feature one of his recent colour photographs. (Contributed by JTRS)

'Dutch Birding' The first issue of a new type-set journal, which will be of interest to British birdwatchers interested in rarities and their identification, has just appeared. Published by the Dutch Birding Association,

Dutch Birding is sent free to all members of the DBA (annual subscription 18 Dutch guilders, payable to C. Klaver, Uilenstede 40, 1183 AJ Amstelveen, Netherlands). Those articles which are not written in English have an English summary. Among the notes of particular interest in this first issue are one on the influx of White-billed Divers *Gavia adamsii* in Holland in early 1979, which includes some very useful photographs; another on the Pallas's Fish Eagle *Haliaeetus leucoryphus* which occurred in Flevoland in January 1979, with some interesting sketches and comments on field identification; and another commenting on the Eagle Owl *Bubo bubo* which has been observed regularly in one area for the past five years; there is, however, some possibility that this bird is an escape, as is certainly the case with another owl mentioned, a Great Horned Owl *B. virginianus* which has also been living wild in one area for a considerable time. Perhaps the most valuable note is the one on Hume's Tawny Owl *Strix butleri* in Israel, which reveals that it is a far commoner bird than many had supposed and also includes the first prey list for this species we have seen published, based on pellet analysis. There are also notes on various other species and up-to-date reports of occurrences during April, May and early June 1979. *British Birds* readers will also feel at home with the 'Mystery photograph' feature, with the answer promised for the next issue. It is a pity that the reproduction system used has resulted in the photographs and drawings being of very poor quality, but perhaps there will be improvements in future issues. At any rate, this looks like being an interesting new journal.

Fun section We are indebted to Ken Osborne for drawing our attention to the following programme note in the *Radio Times* for 23rd June: '11.30—Wildlife: "Can you tell me why birds such as flamingos, ducks and waders so often rest on only one leg?" Our carefully balanced team of naturalists answers your wildlife questions...' Jeffery Boswall has kindly reminded us of another good short note title: 'Captive Antarctic Skua swallowing pink woollen glove': we were sorry to hear that this had been rejected by this august journal, but at least it did appear in print, in the *Avicultural Magazine*.

Birds dropping shells Our remark that Shetland crows may drop shells onto roads and await passing lorries to break them open also interested Jeffery Boswall. For a paper on tool-using and other related behaviour by birds, he would welcome any first-hand details of this or any other similar activity, as soon as possible please. Write to him at Birdswell, Wraxall, Bristol BS19 1JZ.

Can you beat this? Our recent attempt (April 'News and comment') to get you to write in with your choicest multiple observations has produced surprisingly little response. However, after gently taking us to task for wasting space on such light-hearted matters, Lawrence Raymond Price gave us a mouth-watering list of birds seen in the Middle East, though not all together or at the same time. Steve Madge has reminded us of a memorable day at Fairburn Ings, Yorkshire, when he had Garganey, Red-necked Phalarope and Collared Pratincole all in his glasses at once, and Maurice Jones has written to tell us of an even better eyeful in Mallorca: Glossy Ibis, Blue-winged Teal, Marsh Sandpiper and Black-winged Stilt.

Society of Wildlife Artists This year, 97 artists—including a few sculptors—had the satisfaction of having their work shown at the society's sixteenth exhibition, held at the Mall Galleries between 21st June and 14th July. As with all shows of this kind, the list of artists reads like a roll-call (though inevitably incomplete: where were Norman Arlott, Keith Brockie and Hilary Burn, for example?) of the established and the up-and-coming. As with other such events, the run-of-the-mill visitor is struck by the variety of artistic styles that go to make up wildlife art: one can be turned on or off individual wildlife paintings for the same intangible reasons that determine reactions to pictures in any art gallery: the 'form', the 'texture' and so on, as the pundits would have it. With most of the 345 works for sale, and price tags all the way from £15 to £2,160, the visitor who was also a prospective purchaser need not have been put off. Had they not already been sold, I can honestly say that I would gladly have dug quite deep into my pocket for Donald Watson's 'Greylag Geese in Galloway—Midwinter', or—with a deep breath—rather deeper for Eric Ennion's 'Oystercatchers assembling on a salting'. Such is life. (Contributed by Roger Woodham)

Recent reports

*K. Allsopp and
S. C. Madge*

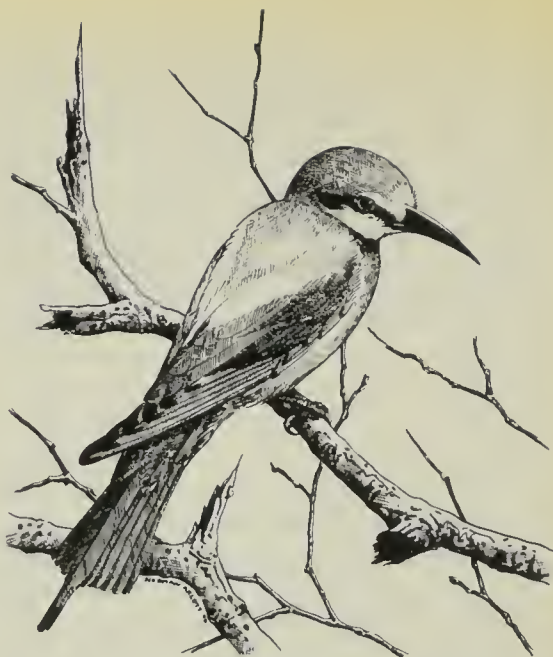
**These are largely unchecked reports,
not authenticated records**

This report covers June, with some May and early July records; except where otherwise stated, all dates refer to June.

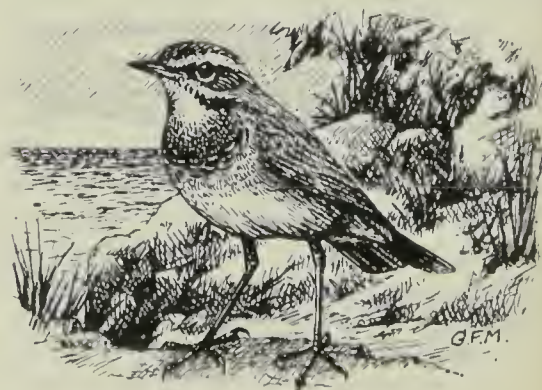
The cool spring weather continued in June until 18th, when an anticyclone developed, bringing a welcome week of summer weather. The retarded development of the flora and associated insect populations during the spring had an obvious effect on the **Swifts** *Apus apus* and hirundines, delaying their return to their nesting sites until food became sufficient to support breeding activities. A fair passage of Swifts was reported from Donna Nook (Lincolnshire) throughout the month, with a thousand being noted on 14th.

Continental overshoots

At the beginning of June, the weather conditions over western Europe were good for migrants, with an anticyclone to the north and southeasterlies across to the North Sea. The super-rarities were mentioned in last month's report, but further reports are worth mentioning, especially those around 5th and 6th, when disturbed thundery conditions occurred along the Danish coast. Four **Icterine Warblers** *Hippolais icterina* appeared on Fair Isle (Shetland), two in Caithness, one on North Ronaldsay (Orkney) and one singing at Hadleigh Downs (Essex) on 4th. As noted last month, **Melodious Warblers** *H. polyglotta* are rare on the eastern side of Britain, so that another on Papa Westray (Orkney) on 11th was of interest, following the two eastern records already reported. After the single **Marsh Warbler** *Acrocephalus palustris* on 2nd, Fair Isle reported four on 6th. Farther south, a male was found at Donna Nook on 5th and another was seen at Eastham (Mersey) in mid June, probably part of the same movement. A further **Subalpine Warbler** *Sylvia cantillans*, making three for the month, turned up at Sandwich Bay (Kent) on 17th, and the third spring **Collared Flycatcher** *Ficedula albicollis* occurred at Frinton (Essex) on 6th. **Bluthroats** *Luscinia svecica*—to be expected



in these conditions—were reported from Sandwich Bay and Filey Brigg (South Yorkshire) on 1st, Fair Isle on 6th and inland at Attenborough (Nottinghamshire) on 9th. The latter was of the white-spotted nominate race and was found in a mist-net: often the only way of finding the rarer passerines away from the coastal sites where concentrating effects make observing more rewarding. Also expected were **Red-backed Shrikes** *Lanius collurio*, again mainly in northeast Scotland, with six on 1st and 6th on Fair Isle, five on 6th and 7th on North Ronaldsay and three at Wick (Caithness) on 4th to 6th. A later record was one at Sandwich Bay on 23rd. The only other shrike report was of a **Woodchat** *L. senator* at Foulness (Essex) on 18th. Again following earlier spring occurrences, there was a **Rose-coloured Starling** *Sturnus roseus* at Malham Tarn (North Yorkshire) on 30th and a **Great Reed Warbler** *Acrocephalus arundinaceus* near Lincoln on 4th July. Two further Fair Isle records were of a **Rustic Bunting** *Emberiza rustica* on 11th and a female **Pied** or **Black-eared Wheatear** *Oenanthe pleschanka/hispanica*—an interesting



identification problem—on 18th. At Holme (Norfolk) there was a **Scarlet Rosefinch** *Carpodacus erythrinus* on 4th. The numbers of commoner passerine migrants, however, were generally small and notable absentees were **Wrynecks** *Jynx torquilla* and **Lesser Grey Shrikes** *Lanius minor*.

There was another **Black Kite** *Milvus migrans*, following those in May, at Loch Tummel (Perthshire) on 7th, and two more spring **Bee-eaters** *Merops apiaster*, in Co. Kerry on 4th and on Cape Clear Island.

Early wader movements

East met west at Teesmouth (Cleveland) this month, when a **Pectoral Sandpiper** *Calidris melanotos* found on 20th was joined by a **Terek Sandpiper** *Xenus cinereus* on 21st and a **Temminck's Stint** *Calidris temminckii* on 22nd. Not content with such riches, the first week of July produced a full summer-plumaged **Lesser Golden Plover** *Pluvialis dominica*. The only rival to this favoured locality was on Orkney, where a **Greater Sand Plover** *Charadrius leschenaultii*, described as immature, was found on 10th, and would, if accepted, be only the second British record, following closely the first, at Pagham Harbour (West Sussex) last winter. Coming back to earth, the return passage of northern waders began in the latter half of June, with the most obvious species being **Spotted Redshanks** *Tringa erythropus*, reported on the English east coast from 13th, with 32 at Minsmere (Suffolk) by the end of the month, **Whimbrels** *Numenius phaeopus*, **Green Sandpipers** *Tringa ochropus* and a few **Little Stints** *Calidris minuta*. A **Red-necked Phalarope** *Phalaropus lobatus* was seen at Minsmere on 30th. The movement of **Lapwings** *Vanellus vanellus* from the Continent also started early, with flocks arriving from early June and becoming noticeable inland by mid month.

Seabirds

The passage of **Pomarine Skuas** *Stercorarius pomarinus* during May, seen off the west coast of Ireland, was also evident at Balranald (Western Isles), with a maximum of 80 on 18th May and a further 15 on 6th. **Long-tailed Skuas** *S. longicaudus* were also reported, with 27 on 18th May at the same locality, followed by singles at Tiree (Western Isles) and Fair Isle both on 6th, and in Cork Harbour in early June. A concentration of first-summer **Mediterranean Gulls** *Larus melanocephalus* was noted during the month at Sandwich Bay, involv-

ing some 20 individuals, while unseasonal visitors were a second-year **Iceland Gull** *L. glaucoides* at Lyme Regis (Dorset) on 1st and a **Sabine's Gull** *L. sabini* at Loe Pool (Cornwall) on 21st. Following their normal pattern of occurrences, **Caspian Terns** *Sterna caspia* dropped in at Cley (Norfolk) on 27th and near Scunthorpe (Lincolnshire) on 4th July; an adult **White-winged Black Tern** *Chlidonias leucopterus* occurred at Filey Brigg on 2nd.

Waterfowl

A rather late male **Smew** *Mergus albellus* remained on Rostherne Mere (Cheshire) until 6th, and, a little farther north, a **King Eider** *Somateria mollissima* was found at South Walney (Cumbria) on 7th. Another interesting record was of a male **Steller's Eider** *Polysticta stelleri* off Papa Westray in the first week of June. The increasing occurrences of these northern ducks suggest that someday they might breed; more likely, however, would be an extension of the breeding range of the introduced **Ruddy Duck** *Oxyura jamaicensis*, a pair of which was seen displaying on Loch of Kinnordy (Angus) in early June.

Latest news

First half of August: **Great White Egret** *Egretta alba*, Messingham (South Humber-side) and later—presumably same bird—Hickling Broad (Norfolk). **Marsh Sandpiper** *Tringa stagnatilis*, Cley (Norfolk). **Short-toed Larks** *Calandrella brachydactyla*, Fair Isle, and Porthgwarra (Cornwall); **Black-headed Bunting** *Emberiza melanocephala*, Fair Isle.

Rarity descriptions

In view of the exceptional influx of rarities during spring 1979, Michael J. Rogers asks observers to submit reports of species on the Rarities Committee's list via the relevant county recorder as soon as possible.



County, regional and bird observatory recorders in Britain and Ireland

The main aims of this list of bird recorders and editors are to ensure that observers on holiday away from their home areas send records to the right people, to encourage co-operation at the inter-county and intra-county levels, and to provide a source of reference for those collating records on a national basis. Several counties are divided into areas for recording purposes, but to save space, and because we believe it is less confusing, the list generally includes only one name against each county or region. The names and addresses of observatory recorders or wardens appear separately at the end. Titles of publications are added only when they do not include the name of the county or counties concerned. We shall be glad to know of any errors, omissions or changes of address.

ENGLAND

- Avon* P. J. Chadwick, 3 Hill Burn, Henleaze, Bristol BS9 4RH. See also Somerset
- Bedfordshire* B. Nightingale, 9 Duck End Lane, Maulden, Bedfordshire
- Berkshire* P. E. Standley, Siskins, 8 Llanvair Drive, South Ascot, Berkshire SL5 9HS. See also Buckinghamshire
- Buckinghamshire* R. E. Youngman, 53 Seymour Park Road, Marlow, Buckinghamshire SL7 3ER. Report (*The Middle-Thames Naturalist*) also covers Berkshire east of the River Loddon. See also London
- Cambridgeshire* For the old county of Cambridgeshire: Mrs I. Jennings, 168 Huntingdon Road, Cambridge CB3 0LB. For the old county of Huntingdonshire, including the Soke of Peterborough: J. D. Limentani, 10 Acacia Avenue, St Ives, Huntingdon, Cambridgeshire PE17 4TN. The report for Huntingdon is reproduced in the Cambridgeshire report.
- Cheshire* J. P. Guest, Sunridge Cottage, Dean Row Road, Wilmslow, Cheshire. Report covers the new county of Cheshire, plus the Wirral peninsula (now part of Merseyside).
- Cleveland* J. B. Dunnett, 12 The Fleet, Stainsby Hill, Thornaby, Cleveland TS17 9AJ. See also Durham
- Cornwall* D. J. Barker, Calidris, Four Lane, Redruth, Cornwall
- Cumbria* For the old county of Cumberland: Ralph Stokoe, 4 Fern Bank, Cockermouth, Cumbria CA13 0DF. For the rest of Cumbria: Malcolm Hutcheson, Garden Cottage, Sizergh Castle, Kendal, Cumbria LA8 8AE. See also Lancashire
- Derbyshire* David Amedro, 212 Derby Road, Ilkeston, Derbyshire DE7 5FB
- Devon* P. W. Ellicott, Clitters, Trusham, Newton Abbot, Devon TQ13 0LN
- Dorset* J. V. Boys, 21 Moor Road, Broadstone, Dorset BH18 8BA
- Durham* Brian Unwin, 2 Albyn Gardens, Sunderland, Tyne & Wear. Report also covers those parts of Cleveland and Tyne & Wear which were included in the old county of Durham, and the former Startforth rural district, which used to be in Yorkshire but is now in Durham. See also North, South and West Yorkshire
- East and West Sussex* M. J. Rogers, 195 Vicarage Road, Sunbury-on-Thames, Middlesex TW16 7TP
- Essex* P. J. Howard, 6 St Bride Court, Colchester, Essex CO4 4PQ & J. Thorogood, 3 Sceptre Close, Tollesbury, Essex CM9 8NB. Report also covers Greater London east of the River Lea and north of the Thames. See also London

- Gloucestershire* J. D. Sanders, 129 Estcourt Road, Gloucester
- Greater Manchester* B. T. Shaw, 87 Gleneagles Road, Heald Green, Stockport
- Hampshire* D. F. Billett, 61 Southampton Road, Fareham, Hampshire PO16 7DZ
- Hereford & Worcester* For the old counties of Herefordshire and Radnor: Allan J. Smith, Yew Tree Cottage, Holme Marsh, near Lyonshall, Kington, Herefordshire. The old county of Worcestershire is covered by the *West Midland Bird Report* (see Staffordshire)
- Hertfordshire* B. Taggart, 103 Hastings House, Sherborne Avenue, Enfield, Middlesex EN3 5BT.
See also London
- Humberside* North Humberside is included in Yorkshire (see North, South and West Yorkshire); South Humberside is included in Lincolnshire
- Isle of Wight* J. Stafford, Westering, Moor Lane, Brighstone, Newport, Isle of Wight PO30 4DL
- Isles of Scilly* D. B. Hunt, 16 Silver Street, St Mary's, Isles of Scilly TR21 0JG
- Kent* D. W. Taylor, 1 Divers Farm Cottages, East Sutton, Kent ME17 3DT. See also London
- Lancashire* M. Jones, 42 Roundway Down, Fulwood, Preston. Report covers the old county of Lancashire which includes Merseyside north of the River Mersey, but excludes Greater Manchester and Furness. See also Cheshire and Cumbria
- Leicestershire* R. Cox, 4 Triumph Road, Glenfield, Leicester
- Lincolnshire* K. Atkin, 5 Hazel Grove, Louth, Lincolnshire LN11 8RU. Report also covers South Humberside.
- London* K. C. Osborne, 8 Ellice Road, Oxted, Surrey RH8 0PY. The London Natural History Society's recording area takes in Greater London and those parts of Buckinghamshire, Essex, Hertfordshire, Kent and Surrey which fall within a 20-mile (32.2-km) radius of St Paul's Cathedral
- Merseyside* See Cheshire and Lancashire
- Norfolk* M. J. Seago, 33 Acacia Road, Thorpe St Andrew, Norwich, Norfolk NR7 0PP
- Northamptonshire* C. J. Coe, 57 West Street, Weedon, Northampton
- North, South and West Yorkshire* John R. Mather, 44 Aspin Lane, Knaresborough, North Yorkshire. Report covers the old county of Yorkshire, apart from the former rural district of Sedburgh which is now included in Cumbria and the part of Cleveland formerly in Yorkshire. See also Durham.
- Northumberland* B. Galloway, 3 Grosvenor Court, Chapel Park, Westerhope, Newcastle-upon-Tyne. Report also covers Tyne & Wear north of the Tyne
- Nottinghamshire* A. Dobbs, Cloverleigh, Old Main Road, Bulcote, Nottingham NG11 5GU
- Oxfordshire* J. M. Campbell, OCC Department of Museum Services, Fletchers House, Woodstock, Oxford OX7 1SN
- Salop* C. E. Wright, 30 Port Hill Drive, Shrewsbury, Salop SY3 8RS. Report also covers that part of Clwyd which was formerly the detached part of Flintshire
- Somerset* J. A. McGeoch, 15 Ash Grove, Wells, Somerset BA5 2LX. Report covers the old county of Somerset, thus including south Avon
- South Yorkshire* See North, South and West Yorkshire
- Staffordshire* G. R. Harrison, Bryher, Hatton Green, Hatton, Warwickshire. The *West Midland Bird Report* covers Staffordshire, Warwickshire, West Midlands and the old county of Worcestershire
- Suffolk* D. R. Moore, Crosslands, Cage Lane, Boxted Cross, Colchester, Essex CO4 5RE
- Surrey* D. Washington, 15 Bond Gardens, Wallington, Surrey. Report covers the old vice-county of Surrey, thus excluding the new district of Spelthorne (containing the Staines group of reservoirs) but including Greater London south of the Thames as far east as Surrey Docks and New Addington. See also London
- Tyne & Wear* See Durham and Northumberland
- Warwickshire* See Staffordshire
- West Midlands* See Staffordshire
- West Sussex* See East and West Sussex
- West Yorkshire* See North, South and West Yorkshire
- Wiltshire* G. L. Webber, 66 Southbrook Extension, Swindon, Wiltshire SN2 1HG

ISLE OF MAN

Records are collected by the Manx Museum and National Trust, and edited by Dr J. P. Cullen, Troutbeck, Cronkbourne, Braddan, Isle of Man,

for publication in *The Peregrine*, which is produced by the Manx Ornithological Society.

WALES

The annual 'Welsh Bird Report', compiled by P. E. Davis and P. Hope Jones, is published in the twice-yearly journal *Nature in Wales*. Reprints can be purchased from D. R. Saunders, 20a High Street, Haverfordwest, Dyfed. This presents a summary of records in Wales as a whole, but county or regional reports are also published and recording is mainly on an 'old county' basis. The names of the new counties are, however, used in the following list:

Clwyd (Flintshire) J. C. Peters, Whitewell Farm, Penymynydd, near Chester

Clwyd (Denbighshire) as Gwynedd

Dyfed (Cardiganshire) P. E. Davis, Fullbrook Mill, Tregaron, Dyfed

Dyfed (Carmarthenshire) D. H. V. Roberts, 6 Ger-y-coed, Pontiets, Llanelli, Dyfed

Dyfed (Pembrokeshire) J. W. Donovan, The Burren, Dingle Lane, Crundale, Haverfordwest, Dyfed.

Gwent Dr W. A. Venables, 30 Carisbrooke Way, Cyncoed, Cardiff CF3 7HW

Gwynedd (Anglesey, Caernarvonshire and Merionethshire) Dr P. J. Dare, Tan-yr-allt, Trefriw, Gwynedd (*Annual Report of Cambrian Ornithological Society*)

Mid Glamorgan J. R. Smith, 15 Milton Drive, Bridgend, Mid Glamorgan

Powys (Breconshire) E. Bartlett, Chapel House, Llechfaen, Brecon, Powys

Powys (Montgomeryshire) R. R. Lovegrove, Hafod, Llandinam, Powys

Powys (Radnorshire) see ENGLAND Hereford & Worcester

South Glamorgan P. G. Lansdown, 186 Springwood, Llanedeyrn, Cardiff

West Glamorgan H. E. Grenfell, The Woods, 14 Bryn Terrace, Mumbles, Swansea, West Glamorgan

SCOTLAND

The annual 'Scottish Bird Report', edited by R. H. Dennis, Landberg, North Kessock, Inverness IV1 1XD, is published by the Scottish Ornithologists' Club, 21 Regent Terrace, Edinburgh EH7 5BT. This presents a summary of records in the whole of Scotland, but, for the time being, recording continues to be on a regional basis (not corresponding to the new administrative regions), partly by old counties and partly by the 'faunal areas' shown on the map at the end of volume 2 of E. V. Baxter and L. J. Rintoul's *The Birds of Scotland* (1953). Note that Skye and the Hebrides are treated separately from the counties in which they lie. The recording areas are listed from north to south under old county names.

In addition to the 'Scottish Bird Report', there are annual reports covering Shetland (except Fair Isle), Fair Isle, the Aberdeen area, the Isle of May, the Clyde, and Ayrshire.

Shetland (except Fair Isle) R. J. Tulloch, Lüssetter, Mid Yell, Shetland

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- Isle of May* J. M. S. Arnott, East Redford House, Redford Road, Edinburgh EH13 0AS
- Fife (except Forth islands) and Kinross-shire* K. Brockie, Morven, Russell Street, Strathmiglo, Fife KY14 7QW
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IRELAND

The annual 'Irish Bird Report', covering the whole of Ireland, is edited by K. Preston, The Rennies, Boreenmanna Road, Cork; it now appears in the annual *Irish Birds*, and is available from W. J. O'Flynn, Ballintubbrid, Carrigtwohill, Co. Cork. There is also separate recording in:

Northern Ireland Northern Ireland Bird Records Committee, c/o Mrs P. M. Vizard, 9 Dillons Avenue, Whiteabbey, Newtownabbey, Co. Antrim

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- Cape Clear* K. Preston, The Rennies, Boreenmanna Road, Cork, Ireland
- Copeland* C. Bailey, 17 Hillside Drive, Belfast 9, Northern Ireland
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- Skokholm* M. Brooke, c/o Edward Grey Institute, Department of Zoology, South Parks Road, Oxford OX1 3PS
- Spurn* B. R. Spence, Bird Observatory, Spurn, Kilnsea, via Patrington, Hull HU12 0UG
- Walney* K. Parkes, 9 Rydal Avenue, Hawcoat, Barrow-in-Furness, Lancashire

Reviews

Animal Marking: recognition marking of animals in research. Edited by **Bernard Stonehouse.** Macmillan, London, 1978. 257 pages; several black-and-white plates and line-drawings. £10.00.

This volume comprises 21 papers delivered at a symposium, organised by the Royal Society for the Prevention of Cruelty to Animals, on the capture and marking of animals for research. The papers are divided into five sections: methods of capture, and marking in captivity; tagging; marking by tissue removal and modification; recognition without marking; and radioactive and radio-tracking techniques. Each section, except the third, contains at least one paper of interest to ornithologists.

Keith Eltringham reviews methods of capture of wild animals. Allowing just three pages for birds, and two drawings, only the bare outlines of the commoner techniques are given. Robert Spencer, of the BTO, presents a thorough review of the development of bird rings, both metal and colour. Ian Patterson, of Culterty Field Station, covers other bird-marking techniques, including dyes, neck-, back- and wing-tags, collars, and nasal-saddles. Not surprisingly, the technique finding most favour with the RSPCA was individual recognition without the need for marking. Unfortunately, it is limited to a few large mammals (e.g. lion, giraffe and elephant) and just one bird, Bewick's Swan. Dafila Scott describes the Wildfowl Trust's study of this last species. Requiring close observation (preferably less than 100 m), and impossible with cygnets, this technique—excellent though it is—seems unlikely to be applied widely. Radio-tracking has been used more on mammals than on birds, but increasing miniaturisation is offering greater opportunities for the latter, as David Macdonald suggests in his account.

Other chapters cover marking of large mammals, bats, reptiles, fish and invertebrates. All, like those on birds, have full and valuable bibliographies. Together they form a most useful reference volume, and, while one may not wholly agree with the opinions expressed in a postscript by the chairman of the RSPCA council concerning some of the techniques, there can be nothing wrong if biologists do pause for thought, as he suggests, before automatically assuming that catching animals and adorning them with bits of metal and plastic is necessarily both essential and humane.

M. A. OGHVIE

Ireland's Wetlands and their Birds. By **Clive Hutchinson.** Irish Wildbird Conservancy, Dublin, 1979. 201 pages; several black-and-white plates; several wash illustrations; many line-drawings. £4.50 (United Kingdom); £4.95 (Republic of Ireland).

Ireland's mild winter climate makes it a very important part of Europe at that season for waterfowl and waders, and a vital refuge when severe conditions prevail farther to the east.

The lucidity of Clive Hutchinson's writing and the first-rate design, with clear, crisp maps, make this a model account of the birds of the Irish wetlands. It is also a most attractive volume, enhanced with illustrations by Gordon D'Arcy, Vincent Sheridan and Killian Mullarney. The photographs are well chosen and give a good picture of the variety of Irish wetland habitats. Despite its attractive presentation, this is essentially a reference work, but one which will be of considerable interest and value outside—as well as inside—Ireland. Both Northern Ireland and the Republic of Ireland are treated equally and the texts have been extensively checked by knowledgeable observers in both countries. The important wetland sites are all mapped and described and there are often tables showing counts at specified localities. In the second half of the book, there are sections on each of the main wetland birds: ducks, geese and swans, waders and so on. As well as the expected species-index, there is also a useful index of localities. The Irish Wildbird Conservancy is to be congratulated on initiating and publishing the results of its 'Wetlands Enquiry', for which the fieldwork was carried out during 1971-75; Clive Hutchinson, the organiser of that enquiry, has made an excellent job of presenting the results. The price must make this one of the best bargains of the year.

J. T. R. SHARROCK

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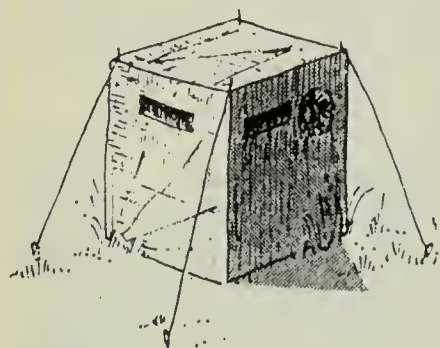
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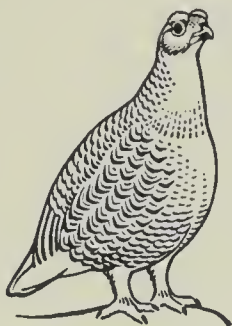
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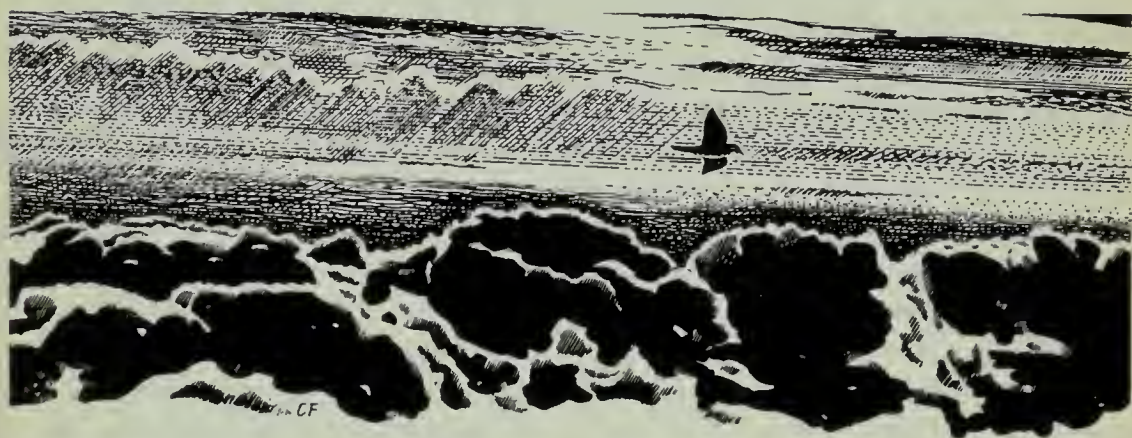
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Avian orientation and navigation: a brief overview

William T. Keeton



Professor Keeton's brilliantly lucid contribution on this fascinating but complicated subject was an acclaimed highlight of the Berlin International Ornithological Congress. This invited review paper has been prepared especially for 'British Birds'

Research on the mechanisms of bird orientation and navigation is currently experiencing a period of very rapid development, with the result that most summaries of this field in the popular literature are badly out of date. My purpose here is to provide the reader with some understanding of modern-day ideas and research thrusts in this field, and to try to communicate a sense of the intense excitement that now prevails in this branch of ornithology.

The more familiar orientational cues

One of the earliest and most stimulating discoveries in the field of avian orientation and navigation was that celestial cues—the sun and the stars—play a fundamental role in bird orientation. Thus, more than 25 years ago, Gustav Kramer (1952) and his students showed that birds possess what has come to be called a sun compass. And, following up Kramer's (1949, 1951) early observations that several species of nocturnal migrants exhibit oriented migratory restlessness (*Zugunruhe*) in circular cages under clear night skies, Sauer (1957) found that such nocturnal orientation depended

on the stars, thus laying the basis for what is now known as the star compass.

The overwhelming preponderance of evidence now indicates that solar cues are used by birds only as a simple compass, not as the basis of a bicoordinate navigation system as proposed by Matthews (1953, 1955) in his imaginative and historically important sun-arc hypothesis (for a summary of the evidence, see Keeton 1974a). In other words, it appears to be only the sun's azimuth (direction from the observer) that provides the bird with orientational information. But the azimuth can provide such information only if the time is known, so that compensation can be made for the sun's changing position throughout the day. That birds do indeed couple their internal clock (circadian rhythm) with their observation of the sun's azimuth in determining compass directions was clearly demonstrated by Kramer (1953a) and by Hoffman (1954), working with caged birds. Later, Schmidt-Koenig (1960) extended this finding to free-flying homing pigeons *Columba livia*. He showed that pigeons whose internal clocks had been experimentally shifted six hours out of phase with true sun time chose initial bearings roughly 90° from those of control pigeons when released at a distant test site (fig. 1A); their clocks had been shifted a quarter of a day, and, as a consequence, they misread the sun compass and chose bearings a quarter of a circle different from those of the controls.

As in the case of the sun, the evidence is overwhelming that the stars

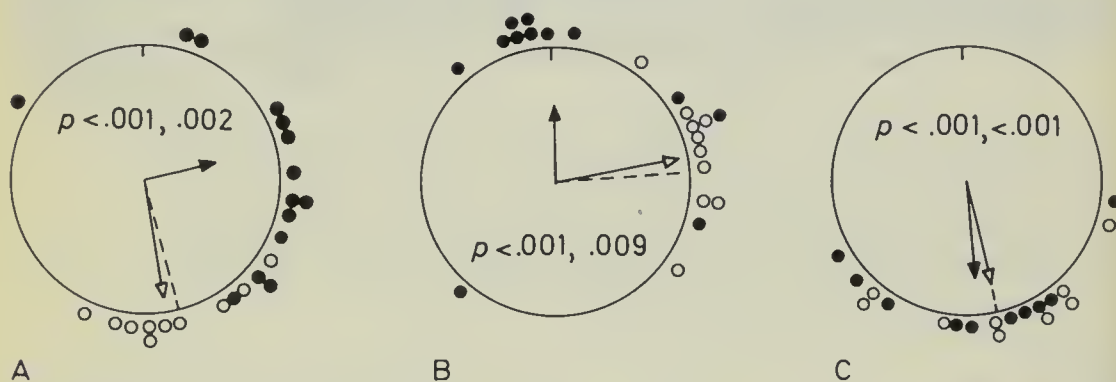
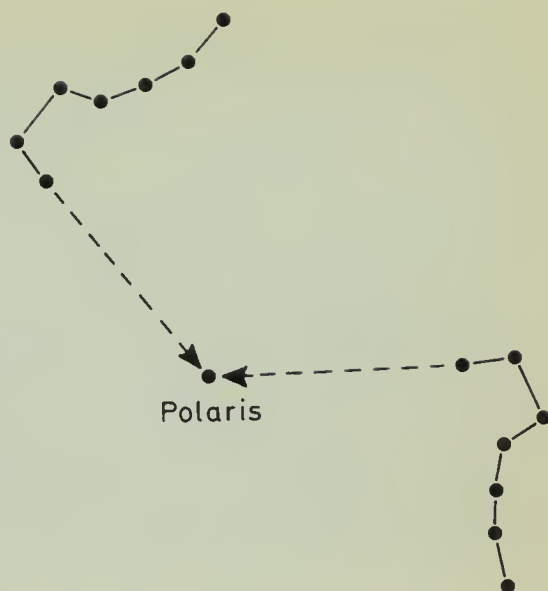


Fig. 1. Vanishing bearings of pigeons *Columba livia* that have been clock-shifted six-hours fast. A: Experienced pigeons released on a sunny day at a distant site. The mean bearing of the clock-shifted birds is roughly 90° to the left of that of the controls. B: Experienced pigeons released on a sunny day at a site less than $1\frac{1}{2}$ km from home where the landscape should be completely familiar. Again, the mean bearing of the clock-shifted birds is roughly 90° to the left of that of the controls. C: Experienced pigeons released on a totally overcast day at a distant unfamiliar site. Both the clock-shifted and the control birds are homeward oriented, and there is no indication of a difference between them, which suggests that, in the absence of the sun compass, the pigeons use orientational cues that do not require time compensation.

In this and later figures showing bearings, north is indicated by a small line at the top of the circle, and the home direction by a dashed line reaching the perimeter of the circle. The bearing of each individual bird is shown as a small symbol on the outside of the circle; where two treatments are included on a single circle, the bearings of the controls are shown as open symbols and the bearings of the experimental birds as filled symbols. The mean vectors are shown as arrows (with open or filled heads, respectively), whose length is drawn proportional to the tightness of clumping of the bearings (i.e. the longer the vector—at maximum reaching the perimeter of the circle—the better oriented the sample of bearings). The uniform probability under the Rayleigh test is given inside the circle; the first value is for the controls and the second for the experimentals

Fig. 2. An example of how north can be located by star patterns. If one draws an arrow running through two particular stars in the cup of the plough or big dipper (Ursa Major), it will point towards Polaris. Although the position of the constellations changes during the night, the same stars always determine an arrow pointing towards Polaris (e.g. towards north, or the pole of the celestial rotation), hence directions can be determined without need of time compensation. Many different star patterns could be used for direction finding in this way



provide only compass information for birds, even though they could potentially be used in true bicoordinate navigation (for a thorough discussion, see Emlen 1975a). Sauer (1957) thought that the star compass, like the sun compass, required time compensation. But, in a detailed study of the migratory orientation of the Indigo Bunting *Passerina cyanea*, Emlen (1967) found that this species uses star patterns to determine directions, a process that does not require time compensation (fig. 2). It seems likely that this is true of other species as well (Emlen 1975a). Thus, the way birds read the star compass differs fundamentally from the way they read the sun compass.

Although the sun compass during the day and the star compass during the night are certainly dominant orientational cues for birds, there is now abundant evidence that neither is essential for proper orientation. Thus, experienced homing pigeons can orient accurately homeward from distant unfamiliar release sites under heavy total overcast (fig. 1C) (Keeton 1969, 1974a). And, tracking-radar studies have regularly revealed nocturnal migrants in oriented flight under heavy overcast when the stars are not visible (e.g. Nisbet & Drury 1967; Steidinger 1968; Williams *et al.* 1972; Griffin 1972, 1973). It is apparent, then, that, though birds often use celestial cues when they are available, they can use alternative cues when necessary. In short, avian orientation systems include redundant, or back-up, cues (Keeton 1974a; Emlen 1975a).

It is also important to point out, as Kramer (1953b) did long ago, that a compass alone cannot tell a bird where it is nor which direction it should fly to reach a particular destination. Other environmental cues must provide goal-orienting birds with an analogue of map information. What might these cues be? Certainly, the most obvious possibilities would be familiar landmarks, but, curiously enough, birds seem to make only minimal use of these. Radar studies strongly suggest that landmarks play little role in migratory orientation (Emlen 1975a; Emlen & Demong 1978). Moreover, pigeons clock-shifted six hours out of phase with true sun time and released half a mile (0.8 km) from their home loft, in an area they have flown over

every day when exercising, usually choose bearings deflected 90° from the homeward course (fig. 1B) (Graue 1963; Keeton 1974a); the birds act as though they have never before seen the place! Even more remarkable, pigeons wearing frosted-white contact lenses that eliminate image vision beyond two or three metres can orient accurately homeward from distant locations, and can even tell when they have arrived at their goal (Schmidt-Koenig & Schlichte 1972; Schlichte 1973).

Another possibility that comes to mind in this age of rocketry is that the birds might have some sort of sophisticated inertial guidance system that would permit them to detect all the angular accelerations of the outward journey and then double integrate them to determine the return course (Barlow 1964). Although this possibility cannot be completely ruled out, it seems very unlikely in view of evidence against it from many kinds of investigations (summarised in Keeton 1974a).

Unusual sensory capabilities of birds

Having eliminated the most obvious cues, we turn next to special sensory capabilities of birds (some of them only very recently discovered) that may play a role in the birds' amazing navigational feats.

Magnetic detection

Although it had often been suggested that birds might be able to derive directional information from the earth's magnetic field, the prevailing opinion of this possibility in the scientific community of the mid 1960s was one of intense scepticism. Most investigators thought it very unlikely that any organism could detect a magnetic field as weak as that of the earth (about 0.5 gauss). But, beginning in the mid 1960s, and continuing to the present, a group in Frankfurt, led first by F. Merkel and later by W. Wiltschko, intensively investigated the possible role of magnetic cues in avian orientation.

Having first found that Robins *Erithacus rubecula* exhibit migratorily appropriate orientation in circular test cages when visual cues are unavailable (Merkel *et al.* 1964), this group went on to show that the orientation of the Robins could be changed in a predictable way by turning the magnetic field (e.g. making magnetic north in the cage coincide with geographic east), and using Helmholtz coils positioned around the test cage (Merkel & Wiltschko 1965; Wiltschko 1968). Their results were later successfully replicated by Wallraff (1972) with Robins, and by Emlen *et al.* (1976) with Indigo Buntings.

Wiltschko (1972; see also Wiltschko & Wiltschko 1972) found, further, that Robins apparently pay no heed to the polarity of the magnetic field, but rather, in the northern hemisphere, take north as that direction in which the magnetic and gravity vectors form the most acute angle (fig. 3). They are unable to orient in visually cueless test cages when the magnetic field is entirely horizontal (i.e. has no vertical component), as is the case at the equator. In short, the birds' manner of reading the magnetic compass is very different from our own.

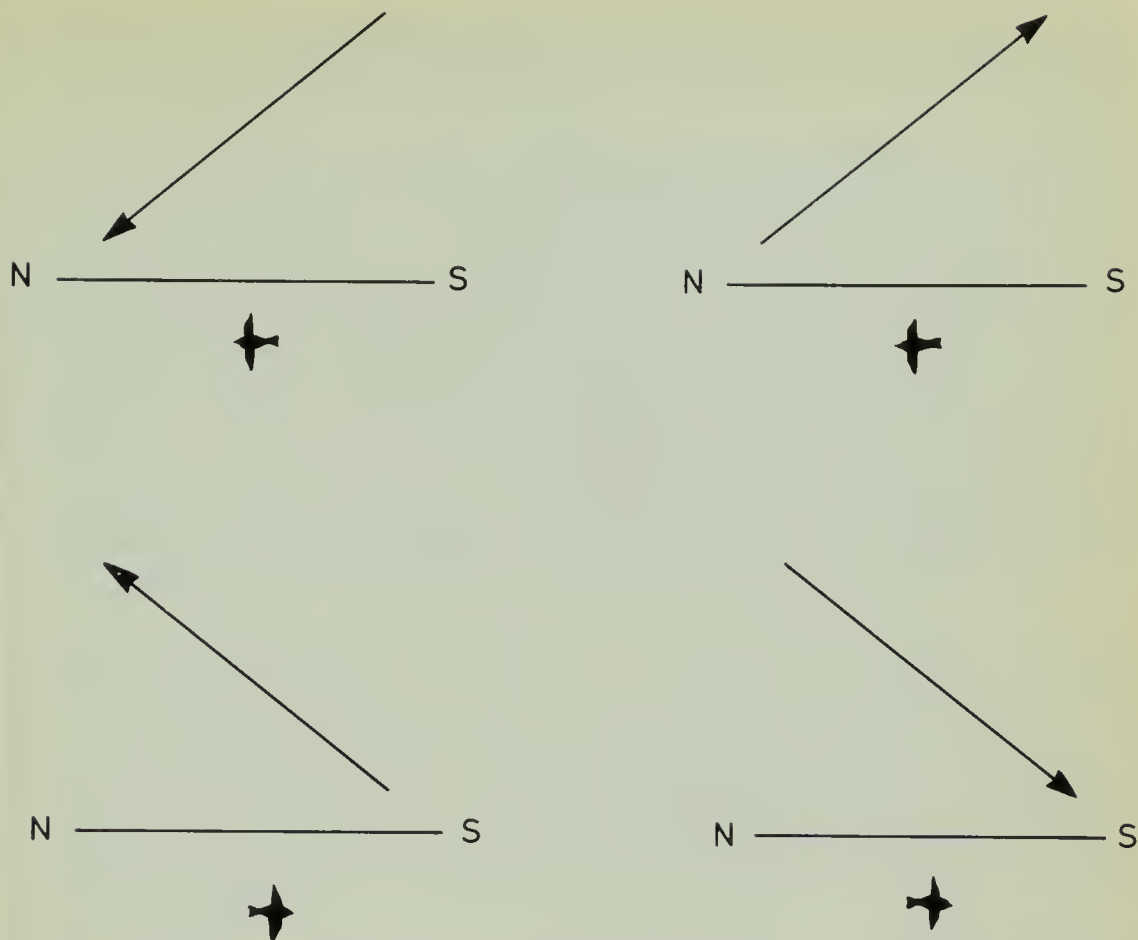


Fig. 3. The magnetic compass of the Robin *Erithacus rubecula*. Top: The birds orient northward in spring, whether the magnetic field vector points north and down (which is the normal condition) or south and up. Bottom: The same birds change their orientation to southward if the magnetic vector points north and up or south and down. In short, it appears to be the alignment of the magnetic vector, not its polarity, that determines the birds' behaviour

The first good evidence of a magnetic effect on pigeon homing came when I (Keeton 1971, 1972) found that bar magnets attached to experienced birds' backs often cause disorientation on heavily overcast days, whereas they have little effect on sunny days. Walcott & Green (1974), using Helmholtz coils on the pigeons' heads and necks, exposed the birds to more homogeneous fields than those produced by my bar magnet; again, there was no dramatic effect on sunny days, but on overcast days the birds' orientation was changed (not merely disrupted) in a manner consistent with Wiltschko's formulation of the way the avian magnetic compass works. These results strongly suggest that the disorienting effects of bar magnets I had found earlier were not due merely to some general physiological disturbance.

Thus emerged the concept that, in the case of homing pigeons, the magnetic field provides compass information that experienced birds use primarily when the sun compass is not available. While probably generally true, this formulation may be an oversimplification. There is a growing body of evidence that magnetic perturbations alter—in a small but consistent way—the orientation of pigeons on sunny days (Keeton 1971; Keeton *et al.* 1974; Larkin & Keeton 1976; Walcott 1977). Moreover, there is also some indication that magnetic information obtained during the

outward journey to the release site may sometimes influence the initial orientation of pigeons (Wiltschko *et al.* 1978; Kiepenheuer 1978; Papi *et al.* 1978a).

Lindauer & Martin (1968; see also Martin & Lindauer 1977) have found that honeybees *Apis* are sensitive to magnetic changes of less than 10^{-3} gauss, and very probably of less than 10^{-5} gauss. There is now evidence from several sources that birds are probably equally sensitive. Thus, Southern (1972; but see also 1978) has reported for chicks of gulls (Laridae), Keeton *et al.* (1974; see also Larkin & Keeton 1976) for homing pigeons, and Moore (1977) for free-flying migrants that orientation is influenced by natural magnetic disturbances, due largely to events on the sun, such as solar flares. Also indicating a very great magnetic sensitivity is evidence reported by Wagner (1976) and by Walcott (1978) that geographic magnetic anomalies may disturb the initial orientation of pigeons.

In view of the abundant evidence that birds are very sensitive to magnetic stimuli, at least when they are orienting, one would hope that we will soon learn the mechanism of their magnetic sense. The recent discovery by Walcott *et al.* (in press) of ferromagnetic material (probably magnetite) in a special region of the pigeon's head is very exciting, though it remains to be determined whether this material functions in magnetic detection. Evaluation of this and other possibilities should be facilitated by Bookinan's (1977) reported success in training pigeons in a two-choice test where different magnetic conditions provide the information on which the choice must be based.

Possible detection of gravity variations

Several years ago, T. Larkin and I noticed that often when animals have shown clear responsiveness to magnetic stimuli they have been simultaneously responding to gravity (e.g. Lindauer & Martin 1968; Wehner & Labhart 1970; Wiltschko & Wiltschko 1972). Consequently, we sought to determine whether gravity cues might play some role in pigeon homing, especially in situations where the birds are using magnetic information. Being unable to alter gravity in the laboratory, we looked instead for a possible influence of the natural monthly gravitational cycle caused by the changing relative positions of the earth, the sun and the moon. We soon found a significant correlation between the pigeon's mean vanishing bearings and the day of the lunar synodic month (Larkin & Keeton 1978). Suggestive as these results may be, however, they do not prove a direct effect of gravitational changes on the birds' orientation, because some other environmental variables to which birds might be responsive may also be related to the lunar cycle.

Despite the still uncertain meaning of the synodic lunar rhythm we found, let us consider the possibilities for birds if they could detect minute variations in gravity. Gravity varies not only temporally but also geographically, in both a regular and an irregular manner. The regular variation is in a north-south gradient and is due to the fact that the earth is not a perfect sphere. The irregular variation is due to the differing densities of the material in the earth's crust at different localities. Gravity cues could,

then, potentially be useful in navigation, both because they could indicate the north-south axis and because they could provide another topography in addition to those we normally consider.

If a bird could use the north-south gravitational gradient to determine true (i.e. rotational) north, then magnetic declination (the deviation of magnetic north from true north) might be readable. It happens that declination is one of the very few environmental parameters that vary as a rough analogue of longitude, hence its potential usefulness would be very great indeed. Moreover, some of our preliminary results (Larkin & Keeton, unpublished) suggest that declination may actually be the parameter of the magnetic field that most influences pigeon orientation during magnetic disturbances. It is very important to emphasise, however, that there is as yet no direct evidence that birds can detect such incredibly tiny differences in gravity (less than 10 gals) as would be necessary to permit use of gravitational cues in long-distance navigation.

Barometric pressure detection

For birds, which spend much of their time in the air, a sensitive ability to detect changes in barometric pressure could potentially be useful in a variety of ways. Hence, it is not surprising that pigeons have recently been shown to possess just such a detection capability (Kreithen & Keeton 1974a; Delius & Emmerton 1978). Other species of birds have not yet been tested for this ability.

One obvious way that birds could use a barometric-pressure sense is as an altimeter. The sensitivity found in homing pigeons is sufficiently great so that they should surely be able to detect a change in altitude of 10 m; indeed, it seems likely they can detect even smaller changes. Not only would an altimeter sense be useful when flying in cloud, but we note also that, if birds really possess the ability to detect changes in gravity, as speculated above, an altimeter would be essential, because compensation for altitude would be necessary in view of the fall in gravity with increasing elevation.

Human meteorologists find a sensitive barometer very helpful in predicting weather changes; why should not a bird use its built-in barometer in the same way? There is, of course, a long history of reports from birdwatchers that the birds in their yard seem to show by behaviour changes that a weather front is approaching, long before the human observer sees any indication of the front. And there is convincing recent evidence that birds about to initiate migratory flight are very good meteorologists indeed (Emlen 1975a). Thus, in eastern North America, major autumnal movements tend to occur on the east side of a high-pressure cell following passage of a cold front, and major spring flights tend to concentrate on the west side of a high-pressure area ahead of an advancing low-pressure cell (Richardson 1978). Many migrants, especially small song-birds, seem to be quite accurate at predicting early in the evening, when they are still on the ground, what the wind conditions aloft will be later that night; they go up in the greatest numbers when the winds aloft will be favourable.

Finally, the last few years have witnessed a growing interest in the possibility that such weather factors as wind directions, pressure patterns

in the atmosphere, and patterns of air turbulence could potentially provide useful orientational information (Griffin 1969; Emlen 1975a), and the detection of these would surely be facilitated by the birds' barometric sense.

Infrasound detection

Although the literature would lead one to think that the lower frequency limit of bird hearing would be about 100 Hz (cycles per second), Yodlowski *et al.* (1977) have found that homing pigeons are sensitive to frequencies lower than 1 Hz. In fact, the audiogram for the pigeon worked out by Kreithen & Quine (1979) shows sensitivity down at least to 0.05 Hz. The pigeons' sensitivity is at the appropriate level for extracting meaningful signals from the background environmental noise.

Detection of infrasound by birds raises an intriguing new orientational possibility. Because attenuation is proportional to the square of frequency, infrasonic frequencies as low as those the birds can detect may travel hundreds or even thousands of kilometres with little energy loss. Potentially, then, pigeons might be able to monitor distant infrasonic sources, such as mountains whistling because of winds blowing across them or waves breaking on a rocky shore, and to use these as a rough system of beacons for determining position.

But, if pigeons are to use infrasounds in this way, they should be able to tell from what directions the sounds come, yet binaural comparisons would be impossible for such very long wavelengths (over 3 km at 0.1 Hz). A possible way round this problem comes from the work of Quine (1979), who finds that pigeons' frequency-discrimination in the infrasonic range is sufficiently good that Doppler shifts in apparent frequency, induced when a bird flies towards and then away from an infrasound source, would be well within the birds' detection range. Thus, pigeons may be able to get directional information from infrasounds while in flight, even if they cannot do so while perching. Field experiments to evaluate this possibility are now in progress at Cornell.

Polarised light detection

The discovery by Kreithen & Keeton (1974b) and by Delius *et al.* (1976) that homing pigeons can detect the polarisation of light may mean that these birds, like honeybees, can continue using a derivative of the sun compass on partially overcast days, when the sun's disc is hidden from view but some blue sky remains. This is possible because of the geometric relationships between the position of the observer, the plane of polarisation of sunlight, and the position of the sun, which permits derivation of the sun's position if the polarisation can be detected. Actual use of polarisation light by orienting birds in the field has, however, not yet been studied.

Ultraviolet light detection

Yet another addition to our knowledge of avian vision is the recent discovery by Kreithen & Eisner (1978) that homing pigeons can see ultraviolet light (see also Delius & Emmerton 1978). This raises the question, now under investigation at Cornell, whether the pigeons perform their analysis of polarisation in the ultraviolet wavelengths, as honeybees do.

Odour detection

Olfaction, unlike most of the other sensory capacities discussed above, is not a recently discovered sense. But the possibility that it may play an important role in avian navigation is new. It was in 1972 that Papi *et al.* first put forward their olfactory navigation hypothesis. Briefly, they propose that young pigeons at the home loft would learn to associate particular odours with winds from certain directions. Thus odour *A* might arrive at the loft primarily on winds from the north, odour *B* on winds from the east, and so on. A bird released at a distant site, say north of home, would detect a strong odour of *A* and therefore determine its position to be north of home. The bird would then use one of its compass systems to locate south, and begin its homeward flight.

Papi and his colleagues at Pisa have performed a long series of ingenious experiments to test their hypothesis, and have reported consistently positive results (for summary, see Papi 1976). Unfortunately, attempts to repeat some of these experiments at Cornell yielded generally negative results as far as orientation was concerned, though there was sometimes an effect on homing success (Keeton 1974b; Keeton & Brown 1976; Keeton *et al.* 1977). Similar attempts at Tübingen in Germany yielded either negative results (Schmidt-Koenig & Phillips 1978) or ambiguous ones (Hartwick *et al.* 1978).

In an effort to resolve the differences between the Pisa and Cornell groups, the two research teams performed six series of collaborative experiments at Cornell in 1977. The general result of these experiments was that, with the exception of deflector-loft experiments, to be discussed later, we found no consistent effect of olfactory interference or deprivation on initial orientation, but we did often find an effect on homing success from distant unfamiliar release sites (Papi *et al.* 1978b). Unfortunately, these results are interpreted one way by the Cornell investigators and another way by the Italian investigators, hence the question of the role of olfaction in avian orientation remains unsolved. Papi and his colleagues feel the poor homing means that olfactory cues play an irreplaceable role in homing from unfamiliar sites. My colleagues and I, on the other hand, feel that, since the olfactorily deprived birds usually depart from the release site on a proper course, their poorer homing may have nothing to do with navigation but may merely indicate a diminished motivation that results in the birds' landing when only part way home. We are concerned about the motivational effects of procedures that interfere in any way with the respiratory system, on which flying birds must make very heavy demands. We attempted to evaluate our suggestion by aeroplane-tracking pigeons in one of the collaborative experiments, but, unfortunately, our suggestion proved almost too true: all five of the experimental birds that were tracked soon landed, and we were unable to get as much detail about the flight course as we had hoped. Before they landed, however, these birds were flying roughly the same course as that followed by control birds.

In one series of collaborative experiments, we were successful in repeating the Italian group's results on initial orientation. This series utilised the deflector-loft technique so imaginatively designed by Baldaccini *et al.*

(1975). In these experiments, pigeons were exposed in their home lofts to winds—and the odours they are presumed to carry—deflected either clockwise or counterclockwise (fig. 4). When tested at release sites, the pigeons chose bearings to the right or left of control pigeons, as predicted by the olfactory hypothesis (Waldvogel *et al.* 1978). These results may indicate that olfactory cues are sometimes used by the Cornell pigeons, but no final decision can be made until experiments that control for the various other orientationally relevant factors altered by the deflectors are performed.

In summary, my appraisal of the role of olfaction in avian navigation is that it is likely that odours constitute one of the many sources of information birds may use in navigating. Olfactory cues appear to be used more by Italian than by Cornell pigeons, for reasons yet to be determined.* But I doubt that olfaction will be found to play as essential a role in avian navigation as Papi and his colleagues have proposed. Indeed, I am not convinced that any single cue so far discovered is essential; there seems to be so much redundancy in the avian navigation system that experienced birds can orient when only a few of the many possible cues are available.

The integration of orientational cues

From all that has been said above, it should be clear to the reader that birds can integrate the many operational cues they use in a variety of ways—according to different weighting schemes, if you will—depending on the birds' age, experience, and species, and on weather conditions, the season of the year, and the geographic location. The old hope that a single system would be found to explain all of avian orientation has gone aglimmering. Hence, one of the chief thrusts of current orientational research is the attempt to learn how the different cues are integrated and what constraints there are on the amazing flexibility of avian navigation systems.

The ontogeny of orientational behaviour

One powerful way of teasing apart the many elements of avian orientation systems is to manipulate the early development of those systems. By doing so, one can often get young birds to omit one or more of the usual cues or to adopt an atypical weighting scheme so that cues that would normally be secondary or tertiary become primary and thus easier to study.

In a series of experiments on the ontogeny of stellar orientation in Indigo Buntings, Emlen (1972) found that there is a sensitive phase during which young buntings learn to read the star compass. If the buntings have had a view of the starry sky during the weeks preceding the start of their first autumnal migration season, they can orient properly when that season begins. But, if they have not seen the night sky until after the first migration season has begun, they never learn to use the star compass, no matter how often they see the sky thereafter.

*This is not the first example of a major geographic difference in bird orientation. Nocturnal passerine migrants in the southeastern United States nearly always fly downwind (Gauthreaux & Able 1970; Able 1973, 1974a), whereas the same species in the northeastern part of the country do so only if the wind direction is migratorially appropriate (Able 1974b, 1978).

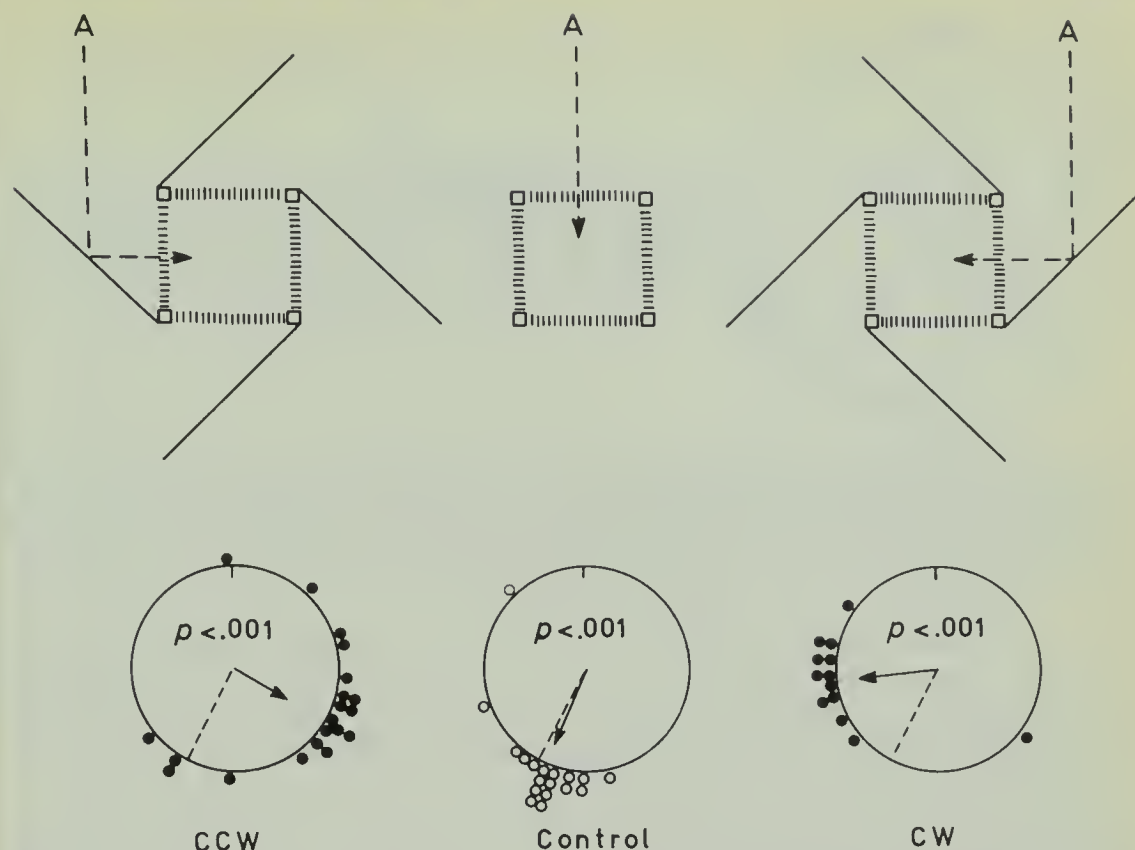


Fig. 4. The deflector loft experiments. Top: All three lofts (control loft in centre, lofts with deflectors on each side) have walls that allow free flow of air. Winds from the north, presumably carrying odour *A*, enter the control loft from the north, but they enter the other lofts from the east and west because of the deflectors. Bottom: Bearings of pigeons *Columba livia* released north of home. The control birds, which had earlier experienced normal air flow (i.e. *A* winds from the north) oriented properly southward, towards home. By contrast, the CW birds, which had experienced *A* winds from the east, oriented more westerly, and the CCW birds, which had experienced *A* winds from the west, oriented easterly. (Redrawn from Baldaccini *et al.* 1975)

Emlen (1970, 1972, 1975b) also showed that young buntings respond initially to the apparent rotation of the starry sky during the night. The axis of this rotation is north-south, hence it can provide compass information. But the birds do not long depend on the axis of rotation *per se*; rather, they soon learn star patterns that will indicate where the axis is, and thereafter they rely exclusively on those patterns. In other words, the axis of rotation functions in ontogeny only as the reference against which the star compass is initially calibrated. When Emlen exposed hand-reared young buntings to a planetarium sky rotating around an incorrect axis, the buntings learned to use star patterns appropriate to that axis, and consequently they oriented in an inappropriate direction when later tested under a normal sky. When retested a year later, after extensive exposure to the normal sky, they had not corrected their orientation; what they had learned during the sensitive phase in their early life still dominated their behaviour.

In orientation studies with young first-flight pigeons (i.e. very young birds released for their first homing flight), we have found that these birds appear to require the sun compass for orientation; if they are released under heavy total overcast they usually depart randomly (Keeton & Gobert

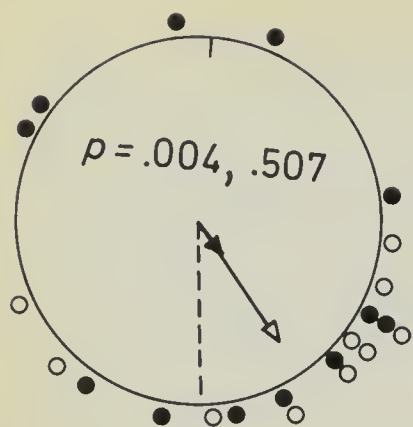


Fig. 5. Bearings on a sunny day of first-flight pigeons *Columba livia* wearing magnet bars or brass bars. The magnet-laden pigeons (black symbols) vanished randomly, whereas the brass-laden birds (open symbols) were well oriented

1970), even though experienced pigeons can orient accurately under such conditions (Keeton 1969). Moreover, first-flight youngsters appear to require magnetic cues also; they usually depart randomly, even on sunny days, when wearing bar magnets attached to their backs (fig. 5) (Keeton 1971). In short, the first-flight birds need both sun and magnetic cues, whereas experienced pigeons need only one or the other. It seems, then, that these young, inexperienced pigeons are integrating cues in a manner quite different from that used by experienced birds. Perhaps the effect of experience is merely to enable them to get by with less information, or, alternatively, the experience may help them establish a hierarchy of choice, so that they can later deal with situations in which two or more cues give conflicting information.

As an example of an experimental manipulation that results in young birds omitting a normal cue, we can cite the studies of Wiltschko, Wiltschko, Brown, and Keeton (in prep.) with so-called 'no-sun pigeons'. In these studies, young pigeons raised without ever having a chance to see the sun (they were flown for exercise only on overcast days) were found to be able to orient perfectly when released under total overcast for their first homing flight, even though normal first-flight pigeons vanish randomly under total overcast (Keeton & Gobert 1970). Having never viewed the sun, the no-sun pigeons had not incorporated it into their navigation system and, hence, had no difficulty orienting when it was missing.

Studies of the ontogeny of the sun compass in pigeons have revealed that the coupling of times, directions, and sun azimuths is not inherited but must be learned (Wiltschko *et al.* 1976). Thus, young pigeons raised under a permanently six-hour-slow clock-shifted photoperiod orient normally, with no indication of the deflection seen in ordinary clock-shifts (fig. 6A). The birds appear to have learned that the 'morning' sun is in the south, the 'noon' sun is in the west, and so on. When these birds are moved to a normal photoperiod and re-tested after five or six days, they then show bearings deflected 90° from the controls (fig. 6B); being put in a normal photoperiod has the same effect on them as a six-hour-fast clock-shift has on normal pigeons. These results indicate that the sun compass must be calibrated, which suggests that it may be a derivative compass: that there may be some other more fundamental directional cue that functions as the reference for calibration. One current line of research is the attempt to determine what that reference cue might be.

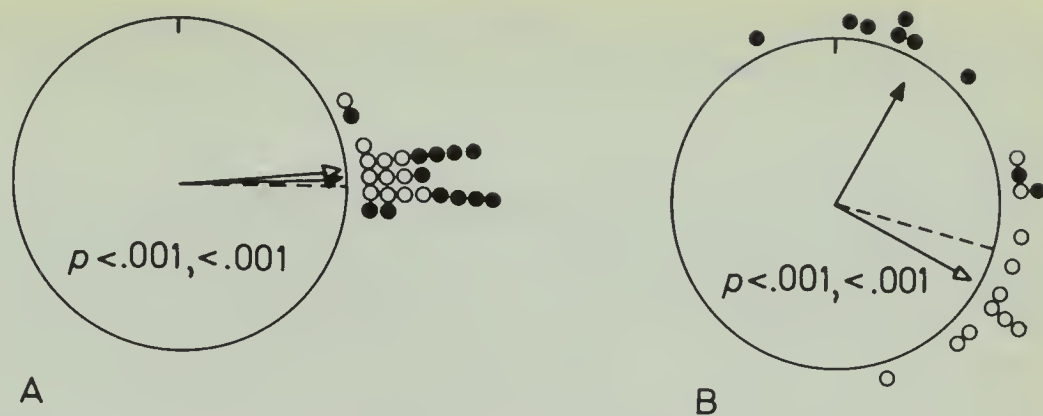


Fig. 6. Bearings of pigeons *Columba livia* subjected to a 'permanent' six-hour clock-shift. Left: While still living under the shifted photoperiod, the experimental birds orient like the controls, towards home. Right: When retested five days after being moved to the normal photoperiod, the experimental birds choose bearings deflected clockwise from those of the controls. (From Wiltschko *et al.* 1976)

Manipulation of physiological condition

Emlen (1969) has pursued the question whether it is the seasonal differences in the temporal positions of the stars that determines southward orientation by migratory birds in autumn and northward orientation in spring, or whether the differences in orientation result from corresponding differences in the physiological condition of the birds. By manipulating photoperiods, he contrived to bring one group of male Indigo Buntings into autumnal condition at the same time that another group was in spring condition. He then tested both groups simultaneously under a spring sky in a planetarium. The birds in autumnal condition oriented southward, whereas those in spring condition oriented northward (fig. 7). Since the two groups saw identical star patterns, Emlen concluded that their different directions of orientation were due to their physiological conditions, not to the environmental stimuli. He predicted that the important factor would be found to be hormonal. Later studies by Martin & Meier (1973) supported Emlen's prediction by showing that the orientation of White-throated

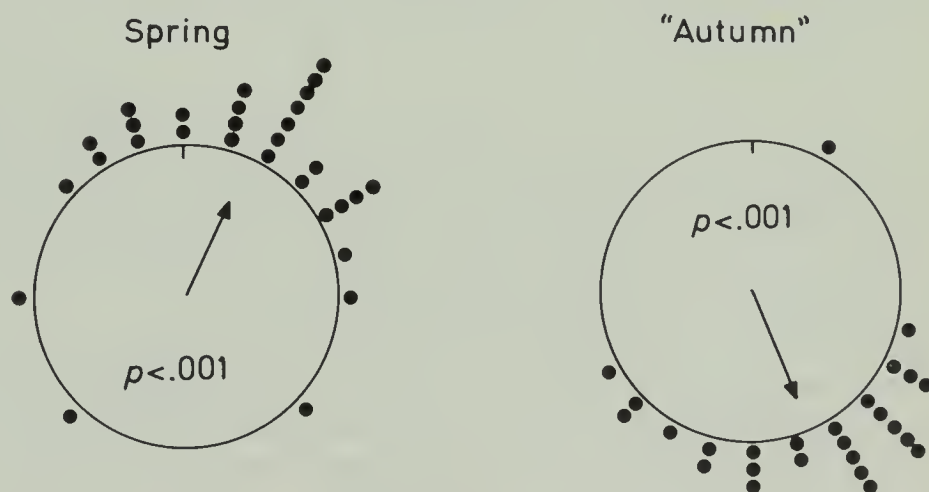


Fig. 7. Orientation under a spring planetarium sky of Indigo Buntings *Passerina cyanea* in spring and 'autumnal' physiological conditions. The birds in spring oriented towards NNE, the usual direction for this species. The birds brought artificially into autumnal condition oriented towards SSE (Redrawn from data in Emlen 1975a)

Sparrows *Zonotrichia albicollis* in circular cages can be reversed by altering the temporal pattern of administration of prolactin and corticosterone.

Conflicts between cues

Another method for getting at the question of the relationship between cues is to pit one cue against another in orientational experiments. Let us examine a few recent examples of investigations using this approach. Wiltschko & Wiltschko (1975) have conducted circular-cage experiments in which migratory birds are able to see the starry sky while experiencing a magnetic field that has been turned by Helmholtz coils. In other words, the birds receive conflicting information from the star and magnetic compasses. The Wiltschkos report evidence that their birds (both Robins and warblers) periodically use the same magnetic field to recalibrate their star compass. The birds may then orient by the stars for a day or so before again taking a magnetic reading. The process is similar to one that a person might use if, after consulting his magnetic compass, he then walked toward a distant tree seen to be in the desired direction; the person might not take another magnetic bearing until he needed to recheck the visual marker or to choose a new one. Wiltschko & Wiltschko (1976) also reported that the birds can use the magnetic field to calibrate an entirely artificial 'star' pattern.

It is important to note the difference between these results of the Wiltschkos, in which magnetic cues appear to be used to calibrate the star compass, and the results of Emlen (1970, 1972), in which the axis of celestial rotation is used. It is possible that the differences are due to the different species used in the two studies. It seems more likely, however, that the main difference is that Emlen was studying the original calibration of the compass by premigratory young birds, whereas the Wiltschkos were testing recalibration by actively migrating birds. Nonetheless, it remains unclear why Emlen's buntings, which have often been tested in a planetarium with the celestial axis not aligned along magnetic north-south, have shown no indication of recalibrating their star compass.

Several series of experiments have been conducted at Cornell in which homing pigeons being clock-shifted by six hours are permitted exposure to the sun and other natural cues during the shifting process. Pigeons allowed to sit in a wire aviary during the overlap period between their shifted day and the real day gave no indication that they derived any orientationally meaningful information from the sun except that the light was on; the timing information potentially available in the sun's position on its arc appeared to be ignored (Alexander & Keeton 1974).

Extending this approach a step farther, Keeton & Alexander (in prep.) tried letting pigeons in the process of being clock-shifted fly for exercise during the overlap period between the shifted and real days. Then, there was an effect on orientation. When tested at a distant release site, young birds given this treatment chose initial bearings deflected less than the expected 90° from those of the control birds (the effect differed somewhat depending on the birds' ages). Apparently, flight, as opposed to merely sitting in an aviary, had made the birds more responsive to the conflict

between their sun compass, their magnetic compass, their visual contact with the loft, and other relevant cues, with the result that the birds given exercise flights during shifting had altered the way they integrated the various cues. Edrich & Keeton (1978), investigating how much flight is required to produce this effect, found that even pigeons exercised only in flight-cages 7.3 m long later chose bearings deflected less than those of normally clock-shifted birds. Further experiments are needed to clarify what cues the clock-shifted birds are using to correct for the erroneous information they get from the sun compass.

Radar tracking of known individuals

In the past, most radar studies of bird migration have used surveillance radar to monitor migratory movements. While this approach has yielded invaluable information concerning the relationships between migratory intensity and accuracy and the weather, it had not been suited to study of the orientation of known individual birds. Emlen & Demong (1978), however, have recently used a large tracking radar at the Wallops Island, Virginia, NASA base to follow individual White-throated Sparrows previously captured and assayed for stage of moult, amount of fat, and intensity of *Zugunruhe*. The sparrows could be released aloft under various weather conditions (including ones where the birds would not normally begin a migratory flight) and after they had been subjected to various manipulations, such as clock-shifting or having a magnet attached. It was thus possible for Emlen & Demong to investigate the decision-making stage of free-flying migration under conditions where different weightings of orientational cues might be expected.

Among their many results, Emlen & Demong (1978, and in press) found that information from viewing the setting sun probably plays an important integrative role during the transition between daylight and darkness. Under overcast skies at night, the birds that had not seen sunset oriented poorly, whereas those that had seen sunset oriented well. This discovery raises a host of new questions for further investigation. For example, might sunset function as a reference for calibration of other cues? And if so, which cues?

Release-site biases

Many investigators have noticed that each release site used for homing pigeons can be characterised by a preferred departure direction that often deviates somewhat from the true home direction; this release-site bias may be only a few degrees to the left or right of home, or, at some locations, it may be as much as 60-80° (Keeton 1973; Wallraff 1978). Curiously, the bias is usually not much affected by the previous experience of the birds (fig. 8A, B, C). It remains on overcast days (fig. 8D) and when the pigeons are wearing magnets (fig. 8E), hence the bias is probably not a function of either the sun or magnetic compasses. Tests with frosted contact lenses indicate that the bias is not due to the birds' visual perception of the surrounding landscape (fig. 8F). The preferred direction is not altered by application of α -pinene to the birds' noses (fig. 8G), hence it seems unlikely that the bias has anything to do with olfactory position-determination in the manner

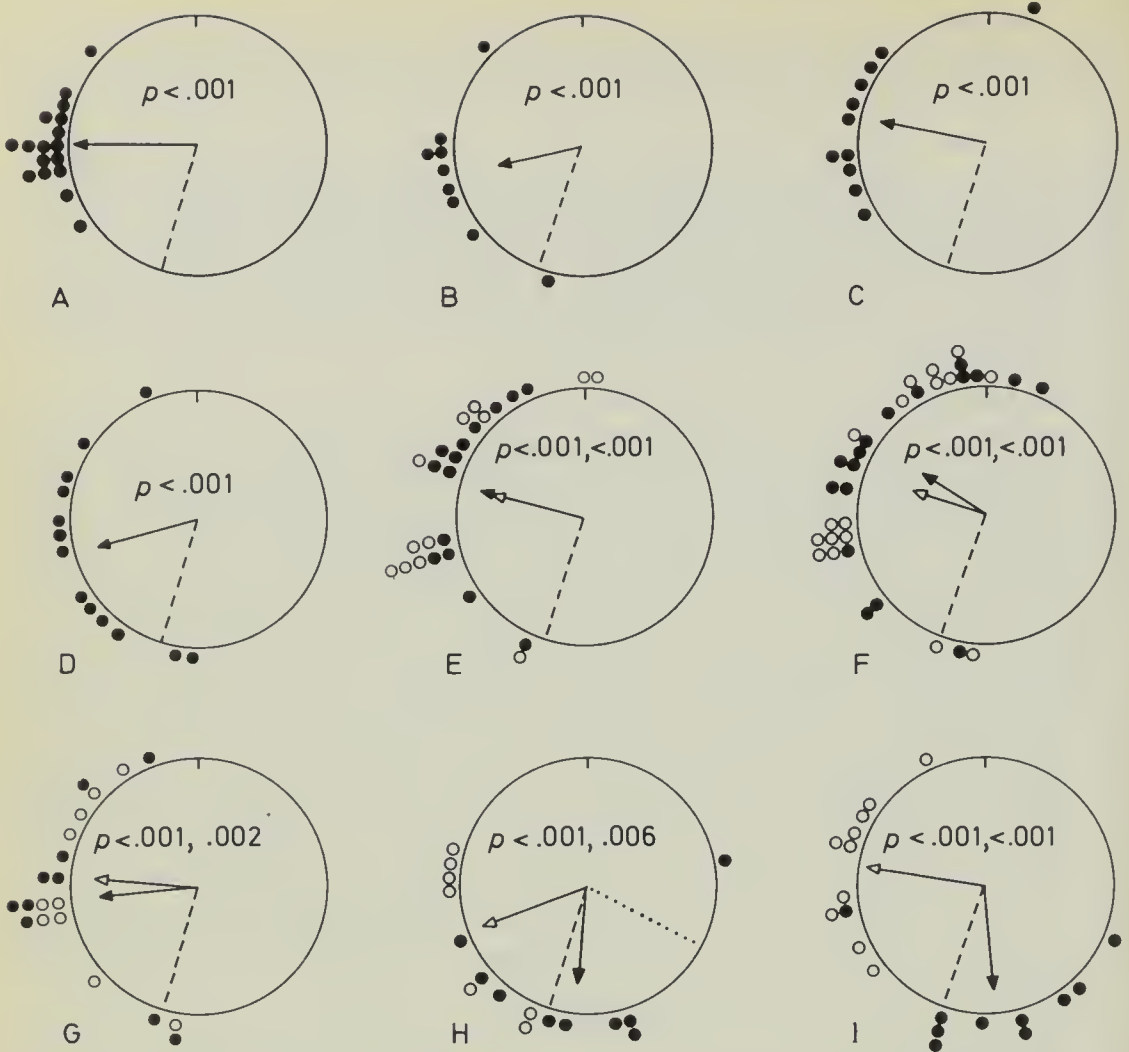


Fig. 8. Bearings of Cornell pigeons *Columba livia* released at Castor Hill Fire Tower (143 km NNE of the loft). A: Experienced birds new-to-site customarily depart in a direction 60-80° clockwise (westerly) from home. B: Birds with prior releases from this site usually continue to choose bearings markedly westerly from the home direction. C: First-flight youngsters also choose westerly bearings. D: Even under total overcast, experienced birds new-to-site depart in a westerly direction. E: The bearings of experienced birds new-to-site are nearly identical, whether the birds are wearing magnet bars (black symbols) or brass bars (open symbols). F: Experienced birds new-to-site choose westerly bearings, whether they are wearing frosted-white contact lenses (black symbols) or clear lenses (open symbols). G: The bearings of experienced birds new-to-site whose beaks and noses had been painted with α -pinene in vasoline (black symbols) did not differ significantly from those of control birds treated with plain vasoline (open symbols). H: The bearings of pigeons brought from Schenectady, New York (black symbols), were deflected clockwise from *their* home direction (dotted line) in a manner similar to the deflection of the bearings of Cornell birds (open symbols) from the direction to Ithaca (dashed line); it appears, therefore, that some cue basic to pigeon navigation is rotated clockwise at Castor Hill, and that pigeons with different destinations read the cue in the same manner. I: Although pigeons clock-shifted six hours fast choose bearings (black symbols) that are more nearly homeward oriented than those of normal pigeons (open symbols), their homing success is considerably poorer

proposed by Papi *et al.* (1972). Pigeons from other lofts often choose bearings at these sites that are comparably deflected from their own home directions (fig. 8H). Bank Swallows (Sand Martins) *Riparia riparia* show similar biases at these sites, so the biasing factor (or factors), whatever it may be, is apparently not unique to pigeons (Keeton 1973).

The hope has been that studies of release-site biases would help to reveal local factors that might be at least a part of the long-sought navigational map, and help to show how those factors are integrated with the orientational cues already known. So far, unfortunately, that hope has not been realised. All efforts to explain the biases have failed. Nonetheless, this approach seems worth continued effort.

Concluding comments

From the above account, it should be apparent to the reader that avian orientation is one of the most active fields of ornithological research today. Our whole way of thinking about the subject has changed radically in less than a decade, and the change continues unsloved. A host of new cues are being discovered, and many ways of examining the integration of cues are being pursued. New information is being learned so fast that it is difficult for those outside this field to keep up with it. Yet, despite all the exciting new information and all the impressive progress that has been made, we still cannot put together all the known elements to construct orientational and navigational systems that can do what the birds themselves can do. Clearly, there is much more to be learned. The search for the solution to the mystery of avian orientation and navigation must go on.

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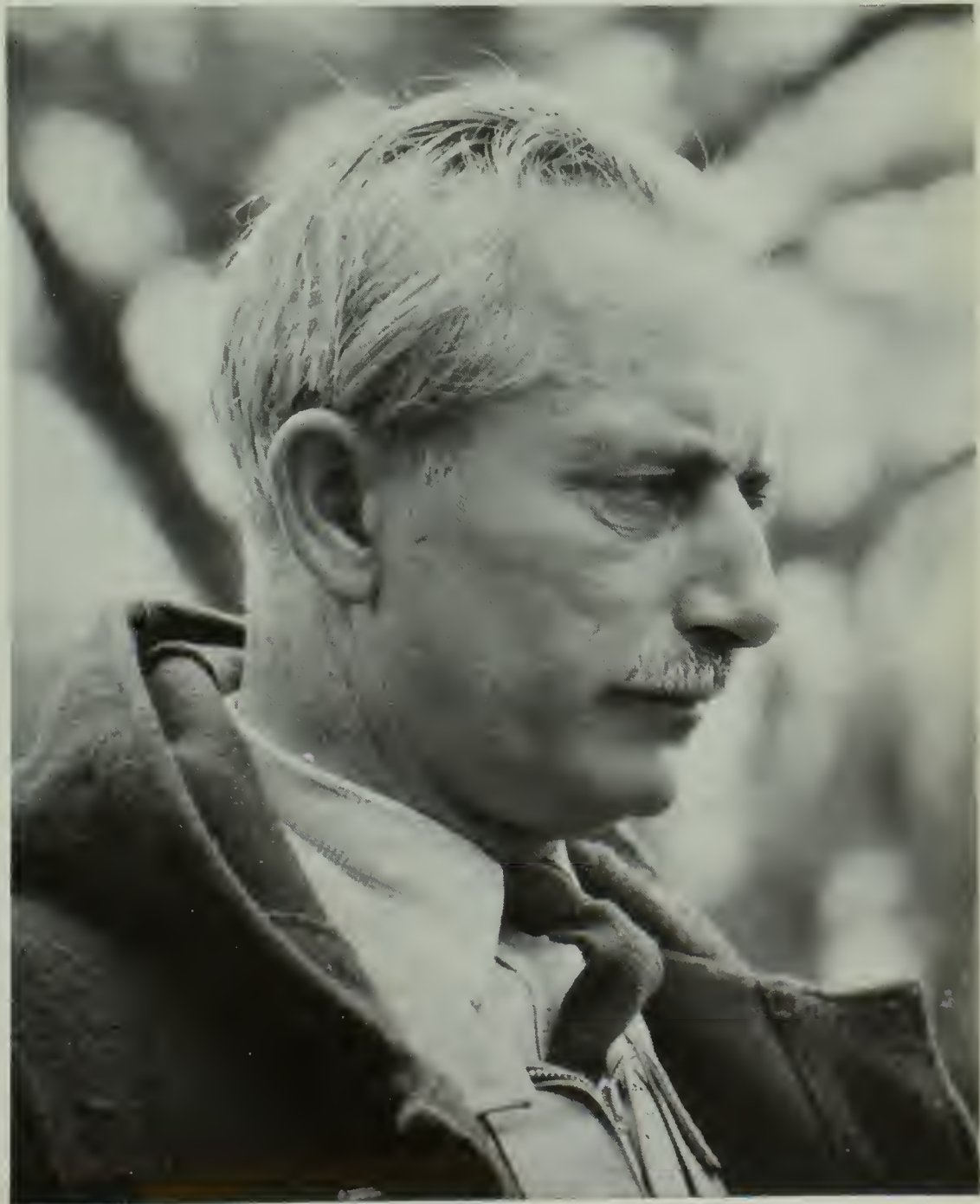
*Professor William T. Keeton, Section of Neurobiology and Behavior,
Cornell University, Ithaca, New York 14850, USA*

Personalities

21 Stanley Cramp

To some, Stanley Cramp is an austere Olympian figure, one of the great European ornithologists of the 20th century, but known only as most of us know Giscard d'Estaing or Harold Macmillan. To others, he is the ubiquitous and tireless expert always in the thick of the battle, urging conservation policies in—and on—Brussels, presiding over the BOU, being a major force in ICBP, providing the senior presence at the *British*

211. Stanley Cramp (*Francis Roux*)



Birds editorial table, sitting on or chairing a round dozen committees, the while, in some unexplained way, managing, in that tiny set of offices in the Grays Inn Road, to carry the main and stupefying burden of assembling and editing the new Handbook.

To yet others, he is that fierce goshawk of a man (study those profile photographs carefully) who turns out to be gentle and like most but, alas, not all famous bird men, patient and kindly disposed towards the birding novice and even the nincompoop. Only in the council room, when someone on the staff is being devious, or a member has failed to read his papers and is asking waffling questions, will Stanley's relationship with the genus *Accipiter* rather than, say, the *Sylvia* warblers, become evident.

To his friends, the main emotion engendered is one of affection laced with awe for someone who can be so inexorably efficient at doing a multitude of jobs yet who invariably has time to be nice to everyone, and whose scholarly prose is so devastatingly lucid and readable.

With all his vast home and overseas experience in the field, he still manifests the youthful enthusiasms, and a RSPB Council 'reserves week-end' illustrated not a few sides to his character and physical abilities. Travelling from the Welsh Border to the Dovey estuary we had 19 Red Kite sightings; no-one exulted more than the (then) Reserves Committee Chairman. The evening at our hotel found us playing some lunatic bird-naming game; Stanley's outrageous and exuberant suggestions (Sardine Warbler was, I recall, his interpretation of a fish eating passerine) clearly dismayed the younger members of the party who do not expect their ornithological gods to indulge in Lower Fourth Form humour. Morning revealed him in his conventional UK birding outfit which, being surmounted by a Gallic black beret, suggests that he is leading a Maquis detachment to blow up a bridge. (In the war he was, in fact, a RAF navigator.) Yet, with his circa 50 cigarette consumption *per diem*, his was the first calmly breathing figure at the top of the hill looking down on stricken non-smokers pausing dishonestly to look at the view.

The tobacco appetite has led naturally to a Cramp *apochrypha nicotina*; members of an expedition with him on the eastern Turkey raptor route swear that, in the dewy light of dawn in the mountains, a slow burning cigarette could always be seen 'twixt the sleeping Cramp's lips. But I prefer the truer (?) story of a tragic afternoon in Eire when tobacco was plentiful but the matches and lighter fuel were not. Desperation, mainly on the part of his companions, led to the hi-jacking of a gigantic petrol tanker. The splendid Irish driver saw nothing unusual in the request to shake his hose nozzle into the Cramp lighter and the journeys resumed amid mutual felicitations and a cloud of smoke.

Honours, distinctions and tributes have descended on him throughout his 42 years as an amateur and his nine as a professional, but what *is* this remarkable man's greatest achievement to date? You ponder as you ascend in the lift to his bachelor flat in WC1 (suitably BB in the postcode) with pretty nursing sisters ('I'll always be well looked after with a hospital next door', says he) and find the question hard to answer.

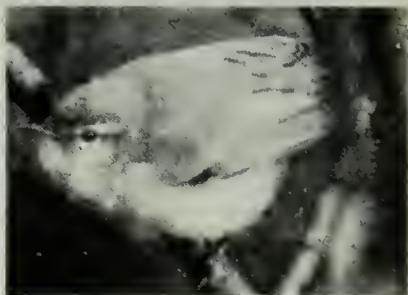
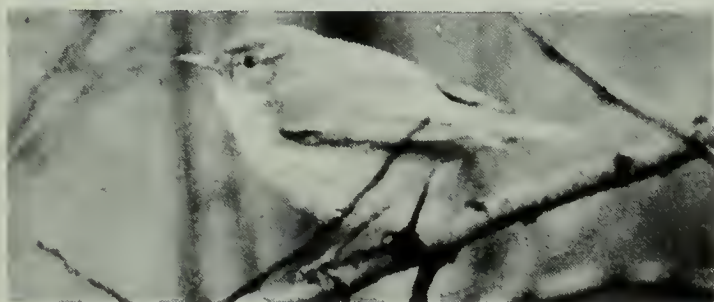
Being in the van of the first and necessarily savage assaults on toxic

chemicals complacency? Chairing the RSPB Council during a five-year period when the membership and the acreage of reserves more than doubled? Serving the BTO for 15 years on Council and as a Vice-President? Slogging away quietly, persistently and most effectively in the EEC, CoEnCo, the NCC England Committee and other bodies with results that we can only guess at but which must add up to a formidable total?

But, you will argue impatiently, there can be not the slightest doubt that *The Birds of the Western Palearctic* (Vol. I in our hands, Vol. II with the printers, Vol. III in advanced preparation) must be the pinnacle of any man's career, since nothing so monumental has ever appeared in ornithological history. Quite so; but remember that here is a rather special person who, whilst being a dedicated scientist, is also a passionate conservationist. Would he, do you think, put the assemblage of every known fact about 740 west Palearctic species above his influence in securing an obscure bit of peat bog for a handful of Red-necked Phalaropes? I don't know; this is something his obituarist will have to work out, hopefully, many years hence.

DEREK BARBER

Mystery photographs



34 Any *Phylloscopus* warbler which shows an obvious single wing-bar is bound to attract attention. Of the European species, this is supposed to be a mark only of Greenish *P. trochiloides* or Arctic Warbler *P. borealis*, both rare in Britain. Last month's photographs (plates 209 & 210, page 434, repeated here at reduced size), however, clearly demonstrate a potential trap. They show a Chiffchaff *P. collybita*, probably of the Siberian race *tristis*, photographed by Dr R. J. Chandler in Kent in March 1977.

Chiffchaffs quite often show a hint of a wing-bar, usually when the light catches the pale fringes and the raised contour of the greater-covert tips at a certain angle, but it is usually a fleeting impression and not a defined plumage mark. In any case, the yellowish underparts and olive-toned upperparts of the familiar west European race *P. c. collybita*, or the less yellow, more uniform brown appearance above and below of the Scandinavian race *P. c. abietinus* (a regular passage migrant in Britain), rule out the risk of confusion with the two rare species.

On some individuals, however, such as the one featured here, the pale fringes at the tips of the greater coverts are apparently broader than usual, and these form an obvious and real wing-bar. While this is perhaps unusual on *P. c. collybita*, on *abietinus* and *tristis* it appears to be fairly standard,

especially in autumn. Confusingly, the Siberian race *tristis* also has pale whitish-buff underparts and supercilium (both with little or no yellow), rather pale grey-brown upperparts, with a hint of olive confined to the wings, rump and tail, and a fine bill: all characters which could easily suggest a Greenish Warbler to an observer unaware of the sometimes striking difference of this race from 'normal' Chiffchaffs. Its call, too, may be confusing: a clear, emphatic 'sweeoo' recalling Yellow-browed Warbler *P. inornatus*, quite different from the familiar 'hweet' of *P. c. collybita* or the plaintive 'pseep' of *P. c. abietinus*, said to recall a lost chick. It is also scarce in Britain, and tends to occur in late autumn and winter.

Once aware of this potential trap, however, there should be little risk of confusion: a typical autumn Greenish Warbler has clean whitish underparts, perhaps with a hint of yellow about the throat and on the broad, well-marked and fairly long supercilium, the latter accentuated by a dark line through the eye. The upperparts are bright, clean olive-green, as are the fine edgings to the wing and tail feathers. Typically, the wing-bar is short and straight, formed by clear-cut, pale yellowish tips to the outer four or five greater coverts; occasionally, at close range, there is a trace of a second wing-bar on the median coverts. The legs and base of the bill often have a pale tone. Generally, Greenish has a striking bright, clean and smart appearance, unlike *P. c. tristis* or *abietinus*, which have a typical Chiffchaff head-pattern of indistinct supercilium and often prominent eye-ring; the wing-bar, if present, is rather ill-defined and tends to be long and curved, involving the tips of all the greater coverts, while the bill and legs are blackish.

PJG

212. Mystery photograph 35. Identify the species. Answer next month.



Notes

Underwing-feeding by Night Heron Canopy-feeding by the Black Egret *Egretta ardesiaca* is well known, and recently has been recorded by M. D. England for Black Storks *Ciconia nigra* in Portugal (*Brit. Birds* 67: 236-237). J. F. Reynolds (*Brit. Birds* 70: 40) also drew attention to this habit of Yellow-billed Storks *Mycteria ibis* and Marabou Storks *Leptoptilos crumeniferus*, and to the wing-flashing technique where one wing is raised vertically, combined with foot-stirring while squatting on the tarsi. On most evenings between 19th October and 3rd November, in northeast Eritrea, I observed an immature Night Heron *Nycticorax nycticorax* at dusk by a shallow stream, feeding on tadpoles, small frogs and toads. If disturbed, it flew up to a small tree or, more usually, ran to the shelter of a small cave in cliffs by the stream; it apparently spent the day in this cave. On one occasion when it was standing by the water's edge and peering into the water, it raised and spread one wing; it maintained this position for several seconds and then lunged forward to take a prey item. This seemingly deliberate behaviour in no way resembled wing-stretching, where the wing is spread outwards and not raised over the head. According to *BWP* (1:245), underwing-feeding has not been definitely confirmed for the Night Heron.

STEPHANIE J. TYLER

Yew Tree Cottage, Lone Lane, Penallt, Monmouth, Gwent



Cattle Egret eating Yellow Wagtail On 9th April 1979, near Vejer in southwest Spain, I had brief views of a Cattle Egret *Bubulcus ibis* with a Yellow Wagtail *Motacilla flava* (probably of the race *iberiae*) struggling in its bill. It was then chased by a second Cattle Egret and disappeared from view. Unfortunately, I cannot say whether it successfully swallowed this unusual prey.

D. W. TAYLOR

1 Divers Farm Cottages, East Sutton, Kent

Cattle Egrets eating poultry chicks A. R. Dean's note on Cattle Egrets *Bubulcus ibis* feeding on a refuse tip (*Brit. Birds* 71: 268) reminded me of the following. On 16th July 1972, at the Ma'agan Michael kibbutz about 30 km south of Haifa, Israel, I observed 40-50 Cattle Egrets feeding on what appeared to be kitchen scraps and waste on the dump. They seemed particularly interested in some light yellow material. As I approached, I realised that this material was, in fact, tiny chickens just hatching from eggs, which had presumably been thrown out from a hatchery. I estimated a couple of hundred eggs/eggshells and about ten live chicks running around, and saw several of the latter being swallowed whole by the egrets.

LARS NØRGAARD ANDERSEN

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Abnormally plumaged Great Skuas off Cornwall On 12th November 1977, in force 9 northwest winds, a large westward passage of seabirds took place at St Ives Island, Cornwall. Of approximately 490 Great Skuas *Stercorarius skua*, over 50 showed white bases to all their primaries and secondaries, so that, instead of the typical 'flash' caused by white primary bases, there was an extensive white band down the centre of the wing, visibly different from 'normal' skuas at great range even in poor light.

Since these birds were seen, N. J. Phillips and VRT have commented separately that, on 14th and 15th October 1976, in force 10-12 northwest winds, they both saw abnormally plumaged Great Skuas off St Ives. NJP (verbally) has informed us that, of about 200 Great Skuas passing west on 14th October, several had an unusual amount of white streaking and patching on their upperparts, chiefly on the mantle, nape and neck, but some also had more than the usual amount of white on the wings. On 15th October 1976, VRT saw 61 Great Skuas, of which 'many' showed large white areas in their wings, although these varied in extent: a single white 'blob' additional to the normal wing flash, large but separated blobs, or a large, irregular white band.

Those seen on 12th November 1977 were not studied in detail, as many passed in heavy squalls which made accurate plumage observation impossible. The chief characteristic, however, was the wing markings, although, once again, these were blotchy and irregular, some individuals appearing 'white-winged' at a distance.

D. M. NORMAN and V. R. TUCKER
Top Flat, 66 Avenue Road, Torquay, Devon

We have consulted Dr Pierre Devillers, who commented as follows: 'Adult *S. skua* is extremely variable; many individuals have a lot of whitish streaking on the body, and this is thus not remarkable. As for the wing pattern, it is of course difficult to know what the observers have actually seen. In Great Black-backed Gull *Larus marinus*, for instance, moult of the greater coverts produces a very conspicuous apparent mid-wing white band in the autumn, which can be confused with "aberrant" patches if one is unwary. There is no reason why it should not happen in *S. skua* also.' EDS

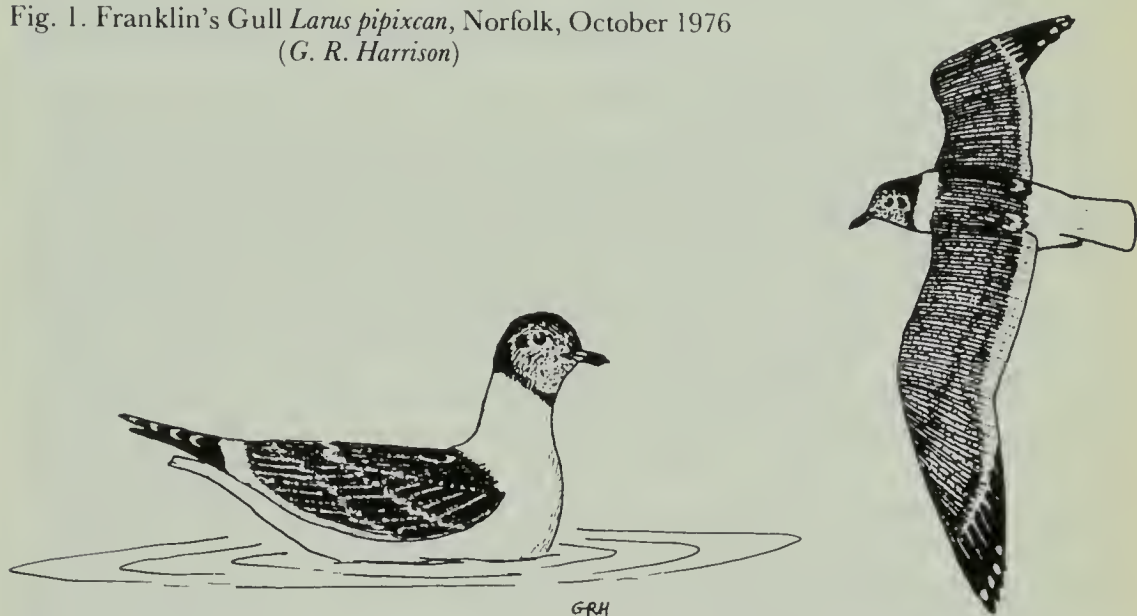
Franklin's Gull in Norfolk The morning of 29th October 1976 dawned miserable, dull and overcast, with moderate easterly winds, rain and drizzle. Mrs D. J. Herlihy, Mrs J. V. Harrison and I decided to spend the morning seawatching from our cars on the cliff top at West Runton, Norfolk. There was a moderate passage of expected species, including Kittiwakes *Rissa tridactyla* and Little Gulls *Larus minutus*, but this gradually diminished as the morning wore on. At about 11.30 GMT, I noticed a lone bird approaching from the north, about 1 km offshore, which I drew to everyone's attention. It soon became obvious that it was a gull with a very light, buoyant flight and long-winged appearance. It flew straight towards us, then, some 150 m from the shore, veered to the east and flew away.

The combination of 'hooded' head and dark grey wings suggested something unusual, but this brief sighting in poor conditions left conflicting impressions rather than hard facts. For one thing, we all thought that it was

larger than a Black-headed Gull *L. ridibundus* and were tending to draw comparisons with Kittiwake or Common Gull *L. canus*, although it was clearly more slender and graceful than the latter. We also had the impression of white in the wing, although no-one could say they had seen a definite bar across the wing.

Having discussed the sighting, and become reconciled to the fact that a positive identification was impossible, we were delighted when the bird returned a few minutes later and settled on the sea below us at a range of 80-100 m. It remained there for some three or four minutes, preening, fluttering and rearranging its plumage, before finally flying away to the west. Although the light was not good, the drizzle by this time had almost ceased; the sea, though broken, was not rough; and the cliff elevation of about 25 m permitted reasonable views of the bird on the water, using 8× binoculars and a 60× telescope (see fig. 1). The following notes were compiled from our joint observations:

Fig. 1. Franklin's Gull *Larus pipixcan*, Norfolk, October 1976
(G. R. Harrison)



SIZE No other species available for comparison, but, with closer views of bird on water, we agreed that first impressions wrong: actually, nearer Black-headed Gull in size, though, if anything, slightly larger rather than smaller. Black-headed Gull which passed shortly afterwards appeared very similar in size, though not so long-winged.

STRUCTURE Flight direct, but very light, buoyant and graceful, with long, narrow-winged appearance very noticeable. At rest, folded wings projected well beyond tail. Head roundish, with steep forehead and eye set high; neck slightly bulbous; body small and light; square-ended tail of normal proportion for gull. Bill seemed between Black-headed Gull and Herring Gull *L. argentatus* in relative proportion.

PLUMAGE Head typical of 'hooded' gull

moulting into winter plumage, appearing grey at distance, but with black streaking apparent through telescope; streaking darkest on crown and nape; usual dark smudge on ear-coverts. Almost complete dark collar clearly delineating extent of hood, which extended farther down nape than on Black-headed Gull, being similar to that of Mediterranean Gull *L. melanocephalus*. Neck, underparts, rump and tail white. Mantle, scapulars and wings slate-grey (slightly darker than Herring Gull). Scapulars and secondaries broadly tipped white, showing as prominent white trailing edge to wing in flight; this white band extended across primaries, separating grey base from black tips, which also showed white 'windows' or spots at or near extremities; in flight, however, this separation did not appear complete, being most noticeable at

rear of wing, but fading towards front, where more reminiscent of wing-flash of skua *Stercorarius*. At rest, broad white separation always visible between black tips of primaries and grey on mantle, scapulars and wing-coverts, even when bird preening and rearranging its plumage: one of most notice-

able features of bird at rest, showing as strong vertical white band. No white along leading edge of wing. Underwing details not seen clearly.

BARE PARTS Medium-sized, dark bill, with pink or reddish tinge at base. Legs not seen.

At the time, we were unable to make a positive identification, but, mindful of the varying plumages of gulls arising from aberrations, age and moult, identification was approached through a process of elimination. From this we concluded—despite the slight size discrepancy and the lack of a clean white separation between the grey inner-wing and the black primary tips—that the bird had been a Franklin's Gull *L. pipixcan*: the third record of this Nearctic species in Britain and Ireland, the previous two being in Hampshire from 21st February to 16th May 1970 and in East Sussex on 4th July 1970 (*Brit. Birds* 64: 310-313; 65: 81-82).

G. R. HARRISON

Bryher, Hatton Green, Hatton, Warwickshire

Franklin's Gull in Cleveland While birdwatching on the North Gare breakwater at the mouth of the River Tees, Cleveland, on 24th July 1977, I saw a gull flying directly towards me. When it was about 50 m away, I saw the jet-black hood and red beak. In that instant, I concluded that it was an adult Mediterranean Gull *Larus melanocephalus*, but almost immediately realised that it had quite a large expanse of black at the tips of its wings. I considered, but rejected, Sabine's Gull *L. sabini*, since the hood was jet-black. Sub-adult Mediterranean Gull—with a complete black hood, a small amount of black on the outermost primaries, and the rest of the plumage being virtually white—was the next possibility which went through my mind in the three seconds while the bird was still flying directly towards me, but then, when it was about 20 m from me, it dropped down below the level of horizontal sight, and I realised that its back and inner half of its wings were grey. Sabine's Gull passed through my mind again, but as well as having a black hood, not grey, it did not have conspicuous white triangles on its wings. I then realised that it could be only Laughing Gull *L. atricilla* or Franklin's Gull *L. pipixcan*, or a species that was not recorded on the European or North American lists. I now knew what to look for with regard to the wing markings. No more than six or seven seconds had passed since I first saw it, and, as it passed about 15 m away, it dropped low over the water, about 3 m below the level of the breakwater, and banked slightly, giving a perfect, though brief, view of its whole upper surface. I noted the following points:

Back and most of wings very distinct shade of grey, unlike any of the usual gulls: darker than Kittiwake *Rissa tridactyla*, but not quite so dark as back-colour of British race of Lesser Black-backed Gull *L. fuscus*. Wing tips black, with white spot at end of each

primary; between grey back and black tips, there was an off-white dividing line, not so prominent or bright white as primary spots, but well-defined between the grey and the black. Tail appeared white. Head black, with broken white eye-ring.

Having seen the pattern on the whole upper surface, I was sure that the bird was a Franklin's Gull. It continued flying west and, at a distance, the

black hood, grey back and black wing tips were very noticeable. When last seen, it was still flying west and was heading inland.

I was birdwatching with Donald I. Griss when the bird passed, and, after consulting field guides, DIG agreed that the bird was an adult Franklin's Gull. This was the fourth record of the species in Britain and Ireland.

M. A. BLICK

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Franklin's Gull in Suffolk At 10.10 GMT on 13th November 1977, I noticed an unusual gull swimming about 40 m offshore at Lowestoft, Suffolk. It was picking at small pieces of floating rubbish along with two Black-headed Gulls *Larus ridibundus*, which it appeared to equal in size. The plumage was very striking. The combination of small size, partial black head with white eyelids, dark grey back and white-tipped primaries ruled out all the common, and most of the rarer, British gulls. The only species I could bring to mind was Laughing Gull *L. atricilla*. After watching it for about ten minutes, taking notes, photographs and sketches, I went home (about ten minutes away) to make a positive identification. The bird was still there when I left.

With the aid of Peterson (1969) and Bruun *et al.* (1966), I came to the conclusion that the bird was a Franklin's Gull *L. pipixcan*, since Laughing Gull is larger than Black-headed and does not have such large white tips to the primaries, nor so much black on the head in winter. The other possibility, Sabine's *L. sabini*, is smaller and does not have white eyelids. I realised that I needed the flight pattern to confirm identification, so returned to the spot within 20 minutes, but the bird had gone; despite being searched for by about 40 people (I had made two phone calls), it was not seen again that day.

At dawn on 14th, I relocated the bird, roosting with other gulls on the north extension of Lowestoft Harbour. I was able to pick it out from the mass of birds quite easily at a range of about 400 m in dull light by its darker back. I approached to about 50 m; through a telescope, the bill and legs appeared black. In flight, the gull showed a very prominent white trailing edge to its wings, and a narrow white bar between the black tip and the grey of the rest of the wing. I was worried about the narrowness of this bar until I read that Dr K. C. Parkes (*Brit. Birds* 64: 311) had stated that this is subject to extreme variation. I was then satisfied that the bird was a Franklin's Gull. I assumed it was an adult, but P. J. Grant has since informed me that the reduced white wing-bar may indicate its being a second-year bird.

On 15th, it was seen by C. S. Waller and P. A. Gregory, who agreed with my identification. On 16th November, together with several others, I watched it from 07.15 to 07.45 on the roofs of buildings and in flight between Lowestoft Harbour and the gas works near Ness Point. On this occasion, I was able to see the grey centre to the tail, which is mentioned by neither of the American field guides.

During the first few days, it became clear that the bird had established a pattern of staying in the Lowestoft Harbour/Ness Point area for about an hour after dawn, and then moving off inland to the southwest, and was only



213. Franklin's Gull *Larus pipixcan* (centre) with two Black-headed Gulls *L. ridibundus*, Suffolk, November 1977 (B. J. Brown)



214. Franklin's Gull *Larus pipixcan* (left) with Black-headed Gull *L. ridibundus*, Suffolk, November 1977 (B. J. Brown)

occasionally seen during late afternoon, when it returned to roost. After much fruitless searching of local farmland and rubbish tips, it was located by R. S. Briggs on 23rd November, following a plough with Black-headed Gulls at Barnby, about 8 km WSW of Lowestoft. It was subsequently seen on many occasions in the area of Barnby, North Cove and Mutford (all adjoining villages), and twice at Oulton Broad.

I watched it almost daily up to 16th March 1978. So far as I can ascertain, it was last seen on 27th March, by G. W. Maybury. During most of its stay, it adhered to the pattern noted above. When the weather became wintry and farming activity ceased, it spent more time in Lowestoft, but, when conditions became better for feeding in the fields, it spent very little time there, especially during March. When in Lowestoft, it scavenged around waste-food containers belonging to the local Birds Eye Foods factory. These bins contained vegetable and fried-batter scraps, and are a regular source of food for thousands of gulls during the winter. On one



Fig. 1. Franklin's Gull *Larus pipixcan* with Black-headed Gull *L. ridibundus* (B. J. Brown)



Fig. 2. Upperside and underside of flying Franklin's Gull *Larus pipixcan* (B. J. Brown)

occasion, I saw it picking up and apparently eating pieces of partly cooked sprouts which had fallen to the ground.

The following details were noted (see also figs. 1 & 2, plates 213 & 214, and vol. 71: plates 186 & 187):

SIZE AND SHAPE Slightly smaller than most Black-headed Gulls, but as large as some smaller individuals of that species. Head relatively small compared with other gulls. Rather short-necked and deep-breasted: making it look hunched and dumpy when standing at rest. Wing-tips more rounded than those of Black-headed, and extending well beyond tail.

PLUMAGE Black on head extended over rear crown, nape, ear-coverts, cheeks and just in front of eye, leaving prominent white 'lids' above and below eye. Front of crown, forehead and area adjoining nape white, speckled black; speckling heaviest where white and black areas met, producing grey effect at distance. Back dark slate-grey; in poor light, appearing almost as dark as palest Lesser Black-backed Gulls *L. fuscus*. Lower scapulars with white tips, forming white crescentic mark on back. Rump, uppertail-coverts and all underparts white. Tail white, with about half of the central feathers grey, appearing darker at base. Upperwing dark slate-grey, with prominent white trailing

edge. Ends of primaries black, with large white tips. Very narrow white bar separated black from—and tended to shade into—grey of rest of wing. Underwing very pale, contrasting with black tip, reminiscent of Kittiwake *Rissa tridactyla* in flight. Feathers appeared pale greyish, with white trailing edge. White bar between grey and black was quite prominent and broader than that on upper surface.

BARE PARTS Bill shorter and thicker than that of Black-headed Gull; looked black, with small, horn-coloured tip to nail. One observer reported that bill was turning red at tip during March. Legs shorter than those of Black-headed, deep greyish-plum (P. A. Gregory described it as dirty pink). Eyes seemed black.

VOICE Usually silent, and never appeared to be calling when feeding with other gulls, but R. S. Briggs heard it call two or three times at Barnby: he described it as harsh and vaguely reminiscent of Sandwich Tern *Sterna sandvicensis*.



Fig. 3. Franklin's Gull *Larus pipixcan* buffeting Black-headed Gull *L. ridibundus* (see text) (B. J. Brown)

When I first found the bird, the black on the head was rather more extensive than described above, especially on the forehead and cheeks. This steadily moulted out during the first few days. A very indistinct band of white speckling became visible from eye to eye across the crown. This feature was never so prominent as can be seen in the photographs of the Hampshire bird (*Brit. Birds* 64: plates 50 & 51), nor was it visible at all angles. On 25th February, I noticed, when the bird flew overhead, a gap at about first primary or secondary in each wing, which I assumed was the start of wing moult. On 8th and 10th March (11 days later), I could not see the gap. I had no further opportunity to see the bird in flight after this, but P. A. Gregory commented that it looked 'rather tatty' during mid March. D. R. Moore detected a pinkish flush on the breast when he saw it in bright sunlight at Carlton Colville on 10th March.

Behaviour was basically similar to that of the Black-headed Gulls with which it consorted at all times. It was, however, rather shy and usually the first to fly and the last to return, if it returned at all. On one occasion, I entered a field where it was feeding with a few Black-headed Gulls. All the birds flew up when I approached, but, whereas the others immediately settled farther away, the Franklin's flew off out of sight.

Although it seemed to get on well with all the other gulls, neither competing nor quarrelling with them, I saw it indulge in a peculiar form of aggression on two occasions. Standing on the ground, it ran at a Black-headed Gull, noiselessly, with wings half open, head lifted high, but bill pointing downwards, and buffeted the other gull with its breast, knocking it off balance sideways (fig. 3). On each occasion, there was just one attack, no follow up, and no provocation, retaliation or reaction from the other gull, which also remained silent. At times, the Franklin's was in much closer proximity to other gulls, yet took no such action.

B. J. BROWN

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Dusky Warbler feeding high and looking greenish On 11th November 1978, a Dusky Warbler *Phylloscopus fuscatus* was trapped at Sandwich Bay, Kent. A detailed description was taken by DMB and the normal brown coloration of the upperparts was noted. The bird was released in a copse of a

mixture of willow and sallow *Salix* and silver birch *Betula pendula*, with thick bramble *Rubus* at one end. It remained for five days and was usually seen high in the canopy of the copse (cf. *Brit. Birds* 71: 183; 72: 82), occasionally dropping low and sometimes observed near the ground as is supposed to be the species' normal behaviour.

When it was feeding high in strong light, the warbler appeared to be green on its upperparts. On several occasions, it seemed more like a Chiffchaff *P. collybita* with pale legs and a long, broad buff-coloured supercilium. With brief views of the bird high up, at about 6-8 m, observers were sometimes not sure that they were looking at the same bird. As it dropped into the shade, however, the brown coloration soon became obvious again.

By late afternoon, as the light faded with low-sunlight, the bird appeared normal in all situations. It was probably the intensity of sunlight, reflecting off or passing through the green and yellow leaves, that transformed its colour to give it a green appearance. DWT noted: 'I recall a similar instance on 14th November 1976, when a late Reed Warbler *Acrocephalus scirpaceus* had the same greenish appearance, as it climbed reeds in excellent sunlight.'

It would have been very easy to have passed this Dusky Warbler off as just another Chiffchaff, especially if the leg colour and the supercilium had not been seen clearly.

J. H. VANDER DOL, D. M. BATCHELOR and D. W. TAYLOR
Sandwich Bay Bird Observatory, Guilford Road, Sandwich Bay, Kent

Tail-cocking by Dusky Warbler On 12th November 1978, at Sandwich Bay, Kent, I had the good fortune to observe a Dusky Warbler *Phylloscopus fuscatus*—which had been trapped on 11th and which stayed until 15th—feeding in the tree canopy in the manner described by Douglas Page (*Brit. Birds* 71: 183). As the bird disappeared into the undergrowth, I noted that it cocked its rather short, slightly rounded tail in a manner strikingly reminiscent of Cetti's Warbler *Cettia cetti*. This character was commented on independently by other observers. Since this species frequently skulks, its tail-cocking may prove a useful indicator for observers glimpsing a dark *Phylloscopus* going into cover.

JOHN CANTELO

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The slightly rounded end to the tail, mentioned by Mr Cantelo, is also a useful character.
EDS

Penduline Tit in the Isles of Scilly At about 11.00 GMT on 25th October 1977, I went into a small orchard adjacent to the Parsonage garden on St Agnes, Isles of Scilly, to look for a Yellow-browed Warbler *Phylloscopus inornatus* reported earlier in the morning. As I entered the orchard, I saw a small bird flitting about the upper branches of an elm *Ulmus*, but was unable to obtain a clear view until it obligingly flew down to feed in a hedge of pittosporum *Pittosporum crassifolium*, 10 m from me. I was expecting it to be the warbler, but, as it moved into the open, I saw with astonishment the chestnut mantle and greyish head of a Penduline Tit *Remiz pendulinus*. It

remained in the pittosporum for about 20 seconds, swinging acrobatically on the topmost slender twigs of the hedge, before flying off to another part of the orchard, where it vanished into cover. Before this unexpected encounter, I had heard a persistent, high-pitched 'psee' call in the garden, but it was not until the appearance of the Penduline Tit that I associated the calls with the bird. It was possible to follow the tit's progress around the orchard by these constantly uttered calls, even though the caller remained hidden in thick hedges. Knowing other observers to be in the vicinity, I rushed to fetch them, but, despite returning in less than ten minutes, we were unable to relocate the Penduline Tit, although R. McCann and J. Spry had the frustrating experience of hearing several distant calls as we entered the orchard. A search of the island also proved to be fruitless and we concluded that the bird's departure had been as rapid as its arrival.

Owing to the brevity of my views, I did not obtain a comprehensive plumage description, but the following details are extracted from my notes:

Small, plump bird about same size as Blue Tit *Parus caeruleus*, with similar restless, energetic feeding manner. Mantle dark chestnut, reminiscent of small Red-backed Shrike *Lanius collurio*. Blackish primaries edged paler, giving effect of pale panel on closed wing. Head appeared light grey, with

black markings around eyes: precise extent not determined, but did not form characteristic mask of adults, probably confined to lores. Underparts dull white, with darker wash on flanks and vent, but throat clearer white, forming patch contrasting with dingy white of breast.

The plumage indicated that the tit was moulting from juvenile to first-winter plumage, which doubtless explains the somewhat untidy and patchy appearance of its head.

This was the second occurrence of a Penduline Tit in Britain and Ireland, the first being at Spurn, North Humberside, from 22nd to 28th October 1966 (*Brit. Birds* 60: 517-520).

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Fifty years ago . . .

SPANISH GREAT SPOTTED WOODPECKER EATING YOUNG BLUE TITMICE. While in the Almoraima cork woods with Major W. M. Congreve on May 9th, 1890 we saw a male Spanish Great Spotted Woodpecker (*Dryobates m. hispanus*) go to a Spanish Blue Tit's nest in a cork oak, from which he extracted a big unfledged young bird. F. C. R. JOURDAIN.' (*Brit. Birds* 23: 131, October 1929).

Letters

Plumage of Yellow-browed Warblers wintering in southern England In view of recent interest in the occurrence in Britain of Yellow-browed Warblers *Phylloscopus inornatus* resembling the race *humei* (*Brit. Birds* 71: 464-465; 72: 124-125, 130, 485), some comparative notes on three of the nominate race which have been seen at or near the English south coast in recent winters may be relevant.

One at Thorney Island, Sussex, between 10th January and 9th April 1975 and another at Titchfield Haven, Hampshire, in December 1978 were

basically similar and had upperparts very much greyer than typical October birds, although a greenish tone was still noticeable in most lights. Like *humei*, however, the upper wing-bar was not easily detected, and prominent pale edges and tips to the tertials, usually characteristic of *inornatus*, were much reduced.

Also in 1975, one of rather different appearance was present at West Dean, Sussex, between 28th March and 20th April and perhaps should be categorised as a spring record, although it may well have overwintered locally. Judging by its very untidy appearance, it was undergoing a moult of at least body feathers, those of the head and mantle being very grey-brown, with a slight green tinge which was difficult to detect except in favourable light conditions. In striking contrast, the rump was quite bright green and the remiges showed narrow green edges, forming a noticeable mid-wing panel. The upper wing-bar was very difficult to detect and, as with the previous individuals, no prominent yellow was present in the supercilium, which was less pronounced than that of typical autumn specimens, perhaps due to fading of the dark eye-stripe and coronal bands.

We both saw the one at Beachy Head resembling *humei* (*Brit. Birds* 72: 124-126), which was in fact found and identified by PC. He has subsequently gained experience of the race in India and Pakistan and, based on this and the above observations of *inornatus*, we believe that the previously published characters relating to supercilium, upper wing-bar and edges to tertials of *humei* (*Brit. Birds* 71: 464-465; 72: 124-125) are also features of worn, late autumn and winter *inornatus*, although a date by which the earliest worn birds are likely to be encountered is still not clear. C. B. Ticehurst (1938, *A Systematic Review of the Genus Phylloscopus*) stressed the presence or lack of green on the upperparts as the most reliable criterion for separating these races in worn plumage: *inornatus* 'wears to lead grey with green tinge, *humei* to brown with no green tinge'. Our observations appear to correlate quite well with this view and, of course, the relative lack of green on the upperparts has been a feature of the two suspected British *humei*.

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Sussex Yellow-browed Warblers It is perhaps worth adding a postscript to R. E. Scott's note on the unusual Yellow-browed Warbler *Phylloscopus inornatus* at Beachy Head, East Sussex, in 1966 (*Brit. Birds* 72: 124-126). Nearly all the autumn records in Sussex of this species fall outside the usual period of September/early October for Yellow-browed Warblers in Britain. Of the total of 13 autumn records (all but two of which were from Beachy Head), one was in September, two in the period 1st-15th October, eight in the period 16th-31st October, and two in November.

M. SHRUBB
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Disturbance by birdwatchers The letter from R. E. C. Collins and W. G. Harvey (*Brit. Birds* 71: 596-598) must sadden all responsible birdwatchers. Selfish behaviour does immense damage to the relationship between birdwatchers and the rural community. We have to accept that irresponsible minorities exist, and that the very act of promoting and popularising

an interest such as birdwatching inevitably means that some of the followers of that interest will not behave properly. In a way, therefore, we all bear some responsibility. It is right and proper that we should exert what pressure we can to persuade these people to behave sensibly, but we must accept that the problem will never entirely disappear.

For these reasons, I suggest that a fund should be set up, out of which compensation could be paid to farmers, landowners and others whose property has been damaged. Such payments would, of course, be *ex gratia* in nature, and would presumably be paid only in cases where the damage or disturbance could be clearly seen and costed. Even if it were not possible to offer full compensation, the very fact that the birdwatching community was prepared to back up its protestations with some hard cash would go a long way to dispelling the impression that birdwatchers as a whole are selfish and irresponsible.

C. D. PAICE

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I wish to congratulate R. E. C. Collins and W. G. Harvey on their letter (71: 596-598) and to thank the editors for publishing such a full account. It is depressing when one realises that some naturalists can be a potential threat to wildlife. Unfortunately, those who trespass are probably unlikely to have seen the letter describing their bad behaviour. I suggest that it is the responsibility of birdwatchers themselves to intervene when they see others disgracing us all.

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As one who travels the country to see rare birds, I was alarmed and dismayed to read of the troubles said to have occurred because of the Great Bustard *Otis tarda* in Kent (*Brit. Birds* 71: 596-598). Certainly I abhor any behaviour by birdwatchers that is likely to lead to more suppression of news by the fortunate finders of rarities.

While I can appreciate that a 'twitcher' has no right to expect to be told about a rarity, the letter from Messrs Collins and Harvey does seem to reveal the real reason behind much of the suppression of news that has been going on recently. I believe that this suppression is based, at least to a degree, on selfishness. Thus, 200 Kentish birders can see the Great Bustard, but 200 travellers from farther afield cause chaos. Are we to believe that Kent is fortunate enough to be free of the irresponsible minority that taints the rest of the country?

The letter from Messrs Collins and Harvey also seems to suggest that growing crops were trampled. At least on 8th January, when I was present, this was not so, and those people who did leave the footpath and entered the fields were very well behaved, walking carefully around the edges. Also, no-one, on that day, deliberately flushed the bird to see it in flight. Exaggeration of the facts does nothing to help the relationship between 'twitchers' and finders.

Courtesy from the locals to arriving twitchers would most certainly be returned. It is obvious that those who travel to see rare birds would wish to benefit from being on friendly terms with people likely to find rarities.

More recently than the Great Bustard, there has been the Greater Sand Plover *Charadrius leschenaultii* in Sussex. Many people have seen this bird. They have been treated with courtesy by the local wardens, and, as a result, many have made small contributions to the fund that they have set up. This is surely a far preferable relationship than the current, largely unfair, fashion of being 'anti-twitcher'.

STEPHEN J. M. GANTLETT

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These shortened versions of long letters sent to us reveal the expected wide range of views, but certain points seem obvious. An irresponsible minority can give any group a bad reputation, and it is the duty of the well-behaved majority to identify and reprimand those responsible. In doing so, we must recognise, first, that the pressures on someone who has travelled many miles to see a particular bird are greater than those on the local observer who—if he fails to see it—can always return the next day; and, secondly, that visitors to an area will inevitably not be aware of the local conditions, which may, for instance, demand special tact with certain keepers or landowners. For these reasons, those of us who travel to see rarities must be especially circumspect: one ill-considered act by us could adversely affect the birdwatching of local ornithologists for years. Eds

Rarities Committee news and announcements

P. J. Grant and the Rarities Committee

The committee's annual meeting was held at Blunham, Bedfordshire, on 31st March 1979. During the preceding year, membership of the committee was P. J. Grant (chairman), M. J. Rogers (secretary), R. H. Dennis, D. J. Holman, R. J. Johns, B. Little, S. C. Madge, J. R. Mather, Dr R. J. Raines, Dr J. T. R. Sharrock and G. A. Williams. As proposed previously (*Brit. Birds* 71: 423) and in the absence of other nominations, T. P. Inskipp began his membership on 1st March, a month earlier than expected, following the resignation of R. J. Johns, to whom the committee extends its thanks for eight years' valuable service: few people have such a wide knowledge of the rarity scene generally (and none has seen as many species in Britain and Ireland), and his contribution will be missed.

Election of new member

As usual, nominations are invited to fill the vacancy which will arise at or before the end of March 1980, either through voluntary resignation or the automatic retirement of the longest-serving member: they should be sent to me by 31st December 1979. As in past elections, the regional recorders and bird observatories will then be invited to vote. The committee's nomination is D. J. Britton, whose work behind the scenes has already been a great asset to the committee, notably his painstaking statistical work on rarity records which forms the basis for the species totals which now appear in each annual report; he has been a constructive critic of the committee for many years, and has provided opinions on various special topics. He has written several identification notes, and his paper on the identification of Sharp-tailed Sandpiper *Calidris acuminata* will be published shortly.

Species list

With 125 records in 1976, 68 in 1977, and 66 in 1978, Long-tailed Skua *Stercorarius longicaudus* has proved to be very much commoner than expected. The committee has, therefore, decided to remove it from the list of species which it considers, as from the end of this year. The notes on these birds have, however, provided an invaluable pool of identification data, shortly to be covered in an identification paper by J. R. Mather.

Arctic Redpoll

Until recently, accepted sight records of Arctic Redpoll *Carduelis hornemanni* have been listed separately in the report, under the caveat that they 'showed the characters' of the species. We confirm that this treatment is discontinued and, as for birds in the hand, sight records are considered on their merits and published in the main list.

Ringed rarities

The BTO Ringing Office and the committee has agreed a revised procedure for records of rarities trapped for ringing. Descriptions and measurements, sufficient to prove the identification, should be attached to the ringing schedule on which the bird is listed and sent direct to the Ringing Office, which will in turn forward the notes to the committee for consideration. Full details of the correct procedures are given in *Ringers' Bulletin* (December 1978: 49-51).

Photographs of rarities

We welcome prints or slides of rarities—in support of field notes or for publication in the annual report—but please ensure that they are adequately packaged: glass-covered slides are particularly liable to breakage in the post. The committee welcomes permission to retain photographs for its permanent collection, which is building into an increasingly useful source of reference.

P. J. Grant, 14 Heathfield Road, Ashford, Kent TN24 8QD

Summary of spring and summer 1978

K. Allsopp and S. C. Madge

The study of spring migration by radar has shown that the main movements proceed undetected on the ground, and that it is only the smaller ones taking place under adverse weather conditions which result in coastal 'falls'. A total of about 10 million migrant warblers arrive to breed in Britain and

Ireland, which, compared with the few thousand recorded in a season at good migration localities, illustrates their success in choosing the right flying conditions.

Spring departures

The main movements during March and

April involve the departure of our winter visitors back to the Continent, the heaviest migrations taking place with westerly winds. During March 1978, westerlies predominated and, with temperatures generally above average, there were plenty of opportunities for them to leave. On 11th, the warmest day of March, Redwings *Turdus iliacus* were moving over Dungeness (Kent) at the estimated rate of 3,600 an hour; by contrast, only 50 were found grounded the following day, when a cold frontal passage brought dull, foggy weather. From Tyneside, overnight departures were commonly reported throughout the month, and inland there was a noticeable drop in numbers. Fieldfares *T. pilaris*, however, stayed until April, when there were fewer opportunities to leave. The weather turned much worse, with long periods of very cold northerlies and easterlies. Large flocks, some estimated to contain 3,000 birds, were reported from Tyneside, and, on 23rd, 1,000 landed on Fair Isle (Shetland) when favourable southwesterly wind changed overnight to northwest with worsening weather. Later, on 30th, dead birds were found along the Northumberland shore, after several days of bad weather with easterlies over the North Sea. Robins *Eritacus rubecula* and Goldcrests *Regulus regulus* were also being grounded at the beginning of April, when light easterlies made eastward movements hard work. Unusual numbers of Goldcrests arrived on the Calf of Man, where over 200 were ringed, on Fair Isle, where a maximum of 15 arrived on 2nd, and at Tyneside, where flocks of up to 30 were evident. Robins also featured at the last two localities, with 160 on Fair Isle on 3rd and further coastal movement in Northumberland. In the eastern half of England, large flocks of Golden Plovers *Pluvialis apricaria* stayed for most of April, apparently waiting for more favourable weather before moving farther north.

Spring arrivals

Again, radar studies have shown that by far the greatest immigration of summer visitors takes place from late April to May, the birds flying predominantly NNW. The largest numbers occur on nights with following winds, and, if not interrupted by adverse weather, are rarely evident at south-coast observatories. A great increase in spring song on breeding territories is perhaps the best indication of when the birds have arrived in force. Chiffchalls *Phylloscopus collybita* arrive earlier than most migrants, but, after an influx into southern districts on a few favourable nights in mid March, they

became common in northern breeding areas only in April. At Dungeness, a cold frontal passage following warm southwesterlies resulted in a modest fall of 12 Chiffchalls on 29th March. On the same day, 100 Wheatears *Oenanthe oenanthe* were grounded at the same locality. This species also arrives early and was reported to be established on its northern breeding grounds by the second week of April. The cold northerly and easterly weather during the first half of April prevented any large immigration, but, when the winds turned southeasterly after 18th, warblers, chats and hirundines began to arrive in substantial numbers. On the night of 28th, bad weather in the English Channel brought the first spring fall to Dungeness, when 300 Willow Warblers *Phylloscopus trochilus*, 50 Blackcaps *Sylvia atricapilla*, 45 Lesser Whitethroats *S. curruca* and 30 Whitethroats *S. communis* were the commonest migrants found on 29th. The first week of May provided a few days of southeasterlies on which further influxes occurred. A return to cold northerly weather for most of the month inhibited migration. Spotted Flycatchers *Muscicapa striata* featured in small falls at Dungeness on 21st and 22nd, and, farther north, in Northumberland, the species arrived in breeding areas only at the end of the month. Swifts *Apus apus*, which are very dependent on flying insect populations, did not arrive in force inland until the temperatures rose substantially in late May and early June. Many of the hirundines also waited for the warmer weather before returning to their breeding sites.

Passage migrants

A good number of northern breeding birds overly southeast England on their way north, and, during this spring, some others which normally fly farther to the east



appeared on the English east coast after periods of strong easterlies. Such conditions occurred at the very end of April and the first week of May, when the species most obviously affected was the Wrenneck *Jynx torquilla*:



26 were estimated on the Northumberland coast during that period and 23 were present on Flamborough Head (Humberside) on 2nd May. Ortolan Buntings *Emberiza hortulana* are seen regularly in spring only on Fair Isle, but also turned up, with one at Flamborough, two at Dungeness on 3rd, one at Gibraltar Point (Lincolnshire) on 6th and Ouzels *Turdus torquatus*, Wood Warblers *Phylloscopus sibilatrix*, Bluethroats *Luscinia svecica*, Pied Flycatchers *Ficedula hypoleuca* and Greenland Wheatears were also involved in this displacement movement.

Among non-passerines, the most interesting movement was that of Arctic Terns *Sterna paradisaea* across the Midlands on 2nd May. The winds were easterly, and a slow-moving occluded front was lying east-west across central England, giving rather cloudy conditions. Dungeness recorded 3,090 Arctic/Common Terns *S. paradisaea/hirundo* inshore, their maximum May count, while many flocks of about 50 Arctics (and some of over 100) dropped in at inland reservoirs during the day; the maximum was 110 in the Trent Valley (Nottinghamshire). A few days later, further flocks appeared inland, with 450 passing through Fairburn Ings (West Yorkshire) on the four days 5th to 8th. Fair Isle, however, did not record its first Arctic Tern until 10th May. A few Black Terns *Chlidonias niger* accompanied the tern flocks, but were surprisingly low in numbers considering the easterly weather. The wader passage, though more noticeable than in 1977, was not exceptional and no particular species predominated.

Breeding notes

June and July were reported to be the coolest and wettest for 50 years so that, following the colder-than-average earlier months, a reduction in breeding success would have been expected. This does not, however, seem to have been the case, from the few general reports received. Some delay in starting nesting activities was reported, but fledglings appeared to be in normal numbers. Since mortality is high in any season—from many causes—the added hazard of a 'bad' summer (in human terms) may not be significant.

News and comment

Peter Conder and Mike Everett

Eddie Watkinson We were sorry to learn from Pat Watkinson that Eddie has recently had his right lung removed: he is making good progress after the operation and, hopefully, he will be home in Mallorca by the time this appears in print; our best wishes go to him for a full recovery. In the meantime, friends are helping to keep up the excellent service to birdwatchers for which Eddie is so well-known, by dealing with his mail: but delays are inevitable in the circumstances, so have patience please if you are awaiting a reply.

Rarities overseas From time to time, we like to include news of the status of some of the

world's rarest and most threatened birds. Rather a lot of snippets of information have come our way recently, so we hope that readers will bear with us if we consign them to this brief summary paragraph . . . Someone who had better remain nameless was once heard to observe that a flightless, nocturnal parrot which booms and also leks deserved to become extinct! Unfortunately, this looked like the fate of the Kakapo *Strigops habroptilus* until recently, with the last-ditch management programme for this unique New Zealand bird in Fiordland showing few signs of success. But the discovery in 1977 of an apparently viable population on Stewart Island gives hope for the future. We shall await further news with interest . . . The

latest proposals for saving the California Condor *Gymnogyps californianus* from the extinction it faces before the end of this century show a wholly new departure from efforts to save the last 30-40 wild individuals and include plans to involve these birds in a long-term captive-breeding programme, to establish large reserve areas and ultimately to try to re-establish a more widespread population of several hundred individuals. These are the recommendations of the California Condor Advisory Panel set up by the National Audubon Society and the American Ornithologists' Union. Such measures may seem a little surprising to many of us, but American opinion now seems to be that this magnificent bird is rapidly on its way out, so surely any effort which holds even a remote chance of success is worth a try . . . We were pleased to see from the June issue of *Oryx* that wide-ranging ornithologist Dr Bernd-Ulrich Meyburg confirms that the Madagascar Serpent Eagle *Eutriorches astur* (listed by ICBP as one of the five most endangered raptors in the world) still survives in at least one part of the island: until last year it had not been seen by any zoologist for half a century. The Madagascar Sea Eagle *Haliaeetus vociferoides*, Meyburg suggests, may be down to only ten pairs now. Both species need urgent conservation, but very little is known of their ecology . . . The same journal also reports an increase in the numbers of Whooping Cranes *Grus americana*: 71 in the original wild flock (including nine young) and 19 fostered by Sandhill Cranes *Grus canadensis* in Idaho and now 'living wild'. There are also 26 in captivity.

UK Wetlands Report Little seems to have been heard lately of the European Wetlands Campaign of 1976-77, which was organised by the European Information Centre for Nature Conservation and its national agencies and involved 22 European countries. A report on the promotion of the campaign in the UK is, however, available, free of charge, from the Nature Conservancy Council, 19-20 Belgrave Square, London SW1X 8PY.

Useful bibliographies We hear that a new bibliography produced in the USA is now available, this time on the Bald Eagle *Haliaeetus leucocephalus*: it should prove a useful reference work for raptor enthusiasts and, if it is anything like the excellent *Working Bibliography of the Owls of the World* which

appeared recently, it will be well worth having. Both are products of the Raptor Information Centre of the National Wildlife Federation (1412 Sixteenth Street, NW, Washington DC, 20036, USA) and cost \$9 each, plus postage. There are plans to produce a bibliography on the Golden Eagle *Aquila chrysaetos* too, which will be of great interest to European ornithologists, especially since most of the recent work on this Holarctic bird has been done in the USA.

Owls of delight It must be rather nice to live on a landmass which is contiguous with the Arctic and to suffer occasional 'invasions' by arctic owls. Most of us would give our back teeth to see a Great Grey Owl, so imagine what it must have been like to have been in New England last winter when (according to the *incomplete* reports we have seen so far) there were 'large numbers' in Connecticut, individuals at more than 20 sites in Massachusetts, at least 35 sightings in New York State, and so on. Most incredible of all are the reports from Amherst Island in Lake Ontario (Southern Ontario, Canada), where, on one weekend in early March, there were owls of ten species present, namely 34 Great Greys, 22 Long-eareds, 20 Short-eareds, 13 Snowies, four Tengmalm's (Boreal Owls), three Saw-whet Owls, two Great Horned Owls, two Screech Owls, a Barn Owl and a Hawk Owl. As if that were not enough, there was also a Gyrfalcon, and, not surprisingly, 1,000 birders, some from as far away as Kentucky. So, if you want to see some of these elusive owls, don't spend vast sums of money and use up lots of energy flogging around Scandinavia—emigrate!

Kestrel kites The young and the not-so-young fly a great many kites with bird-of-prey designs these days, sometimes catching birdwatchers unawares, even if the designs on some of them are horrific caricatures of the real thing. Such a criticism cannot be levelled at a new kite featuring a Kestrel, designed by none other than Robert Gillmor and built, to the specifications of former RAF aerodynamics expert Don Dunford, by Cochranes of Oxford. This new kite has been exclusively designed for the Young Ornithologists' Club—the Kestrel being the Club's emblem—and will be available from the RSPB's mail order and retail outlets. What, we wonder, will the real Kestrels make of it all?

Recent reports

S. C. Madge and K. Allsopp

We are sorry to report that S. C. Madge has decided to discontinue his joint authorship of this feature. We thank Steve for all his work on our behalf since August 1977. His successor is R. A. Hume, who will be joining Keith Allsopp as regular compiler. In future, all records should be sent to: **'Recent reports', R. A. Hume and K. Allsopp, c/o RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.** Please send monthly reports to arrive—at the latest—by 8th of the following month. EDS

These are largely unchecked reports, not authenticated records

This report covers July and the first part of August; except where otherwise stated, all dates refer to July.

Herons and waterfowl

Another **Little Egret** *Egretta garzetta* was discovered early in the month, at Malltraeth (Anglesey) and a **Squacco Heron** *Ardeola ralloides* near Cliffe (Kent) at about the same time was kept quiet under threat of the gun if the site was invaded by birdwatchers. A **Great White Egret** *E. alba* was reported from Messingham (South Humberside) on 7th August. Gatwick Airport (Surrey/West Sussex) was an appropriate place to see a **White Stork** *Ciconia ciconia* during 9th-17th and a **Black Stork** *C. nigra* flew over a site in Norfolk on 1st August. Two **Cranes** *Grus grus* were reported from Horley (Surrey) on 4th and another remained in the Misson-Newington area (South Yorkshire/Nottinghamshire) from 20th June until 8th. The **King Eider** *Somateria spectabilis* at South Walney (Cumbria) stayed until 23rd June, while the **Steller's Eider** *Polysticta stelleri* at Papa Westray (Orkney) had been found on 22nd June. Scotland had a couple of good breeding waterfowl records this summer: a pair of **Garganeys** *Anas querquedula* bred in Ayrshire and the **Ruddy Ducks** *Oxyura jamaicensis* at Loch of Kinnordy (Angus), mentioned in the June report, produced young: a new breeding record for Scotland.

Raptors

Midsummer records of **Red-footed Falcons** *Falco vespertinus* are now an annual event, with the New Forest area again producing a few records, with another near Beeley (Derby-



shire) on 24th. Following on the spring scattering of out-of-place **Honey Buzzards** *Pernis apivorus* were records of two different

individuals on the Calf of Man on 10th and 11th. An early or wandering **Osprey** *Pandion haliaetus* was about Hanningfield Reservoir (Essex) on 13th and 14th.

Waders

July always seems to provide an interesting crop of wader records. A number of Irish birders travelled to Ballycotton (Co. Cork) to see Ireland's fifth **Broad-billed Sandpiper** *Limicola falcinellus* which was there from 10th-14th; on the latter date, they had the added bonus of a superb full-plumaged **Stilt Sandpiper** *Micropalama himantopus* which remained until at least 17th. A single **Solitary Sandpiper** *Tringa solitaria* was at Dunstable (Bedfordshire) on 24th and **Pectoral Sandpipers** *Calidris melanotos* were found at Steart (Somerset) on 28th-29th and Donna Nook (Lincolnshire) on 30th, while a **Baird's Sandpiper** *C. bairdii* spent 25th at Crossens Marsh (Merseyside). A **Buff-breasted Sandpiper** *Tryngites subruficollis* was discovered at Aberlady Bay (East Lothian) on 3rd August, and there was a **Broad-billed Sandpiper** in the same county a few days later. Even more remarkable was a **Marsh Sandpiper** *Tringa stagnatilis* at Doonfoot (Ayrshire) on 29th. There was a scattering of records of **Little Stints** *C. minutus* and **Curlew Sandpipers** *C. ferruginea* from the English east and south coasts during the last ten days of the month. A **Grey Phalarope** *Phalaropus fulicarius* was reported from a small duck pond in the centre of Harwich (Essex) on 31st. Also of interest were counts at Rainham Marsh (Essex) of over 70 **Green Sandpipers** *T. ochropus* on 23rd and 35-40 **Little Ringed Plovers** *Charadrius dubius* on 30th.

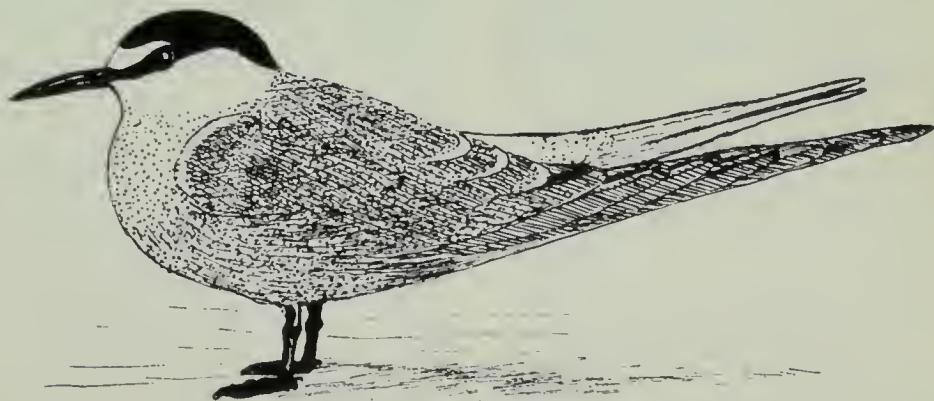
Seabirds

Good numbers of **Manx Shearwaters**

Puffinus puffinus were reported from Fife, including 350 in St Andrew's Bay on 6th August. A **Sooty Shearwater** *P. griseus* off Walney Island (Cumbria) on 18th was rather unusual there, and eight passed Fife Ness (Fife) on 5th August. On the latter date, a **Cory's Shearwater** *Calonectris diomedea* passed Portland Bill (Dorset); earlier, one had passed Troon (Ayrshire) on 29th June. An Irish birdwatcher who went to see a reported Little Gull *Larus minutus* at Bangor (Co. Down) on 26th had the shock of his life when he found that it was really a full-plumaged **Bonaparte's Gull** *L. philadelphia* which was rather tame and quite photogenic when bribed with chips. One of the two **Ring-billed Gulls** *L. delawarensis* which had been discovered at Belmullet (Co. Mayo) back in February, was still there at the end of July. There was a flurry of reports of **Mediterranean Gulls** *L. melanocephala* from the south coast earlier in the month and one reached the Bann estuary (Co. Derry) on 27th; a gull at Sandwich Bay (Kent) on 3rd seemed to fit a hybrid between this species and Black-headed Gull *L. ridibundus*. July seems to be about the most likely month in which to see **Caspian Terns** *Sterna caspia* in this country and this year was no exception, with singles reported from Messingham on 4th, Donna Nook (Lincolnshire) on 14th, West Bromwich (West Midlands) on 25th, Staines Reservoir (Middlesex) on 29th and Spurn (Humberside) on 3rd August. An adult **White-winged Black Tern** *Chlidonias leucopterus* arrived at Teesside (Cleveland) on 11th August.

Aleutian Tern

In June 1868, two specimens and an egg of a tern were taken on Kodiak Island. These were subsequently described as those of a bird new to science: **Aleutian Tern** *Sterna*



aleutica, which was subsequently found to breed very locally on the Bering coast of Siberia and western Alaska but not normally on the Aleutian Islands. It is not known to be highly migratory, merely wintering at sea in the north Pacific not far from its breeding grounds, although it has straggled to Japan. The news that an odd tern that was present in the colony of Arctic Terns *S. paradisaea* on Inner Farne (Northumberland) on 28th and 29th May has now been identified as this species is quite staggering, but the bird was watched and photographed at close range. This remarkable event will, of course, constitute the first record for the West Palearctic if accepted. Stories that the observers were having 'aleutianations' were completely groundless!

Smaller landbirds

By late July, returning passage of migrant passerines was reported from several coastal sites. An early **Pied Flycatcher** *Ficedula hypoleuca* was at Sandwich Bay on 25th. Rather more exciting was the **Greenish Warbler** *Phylloscopus trochiloides* trapped on the Calf of Man on 25th June, with a **Melodious Warbler** *Hippolais polyglotta* trapped there on 14th. Many birders travelled to Burton Gravel-pits (Lincoln-

shire) between 6th and 22nd to try to see the singing **Great Reed Warbler** *Acrocephalus arundinaceus*. Not far away, at Gibraltar Point there was a very secretive male **Sardinian Warbler** *Sylvia melanocephala*, which was trapped on 30th June and again on 28th, but not reported in between; on 28th, it was found to be in heavy moult. After the comment in the June report on the absence of records of **Lesser Grey Shrikes** *Lanius minor* this spring, a rather unhealthy individual turned up at Ringstead (Norfolk) on 25th. There were yet more records of **Alpine Swifts** *Apus melba*, with singles at Messingham on 16th June and on the Calf of Man on 10th, and another **Bee-eater** *Merops apiaster*, this time at Howt Green (Kent) on 3rd.

Latest news

On Fair Isle, **Lanceolated Warbler** *Locustella lanceolata* trapped on 20th September; also immature **Sabine's Gull** *Larus sabini* (second ever for Fair Isle) on 16th. In south-west England in mid-September, **Lesser Kestrel** *Falco sparverius*, **Solitary Sandpiper** and many other nearctic waders (**Baird's**, **Buff-breasted**, etc.), and **Blue-winged Teal** *Anas discors*.

Short reviews

Kestrels in the Kitchen: the story of Bob and Pat Ratcliffe. By Meg Elizabeth Atkins. (W. H. Allen, London, 1979. 184 pages; 17 black-and-white photographs. £4.95.) 'Kestrels, owls, gulls, buzzards, heron, geese, ducks, mynahs and crows living not only with the two humans but also in gentle and interested companionship with a number of Siamese cats . . . in a terraced house in a narrow Manchester street.' **The Natural History of Britain and Northern Europe. Fields and Lowlands.** By Derrick Boatman. **Coasts and Estuaries.** By Richard Barnes. Edited by James Ferguson-Lees and Bruce Campbell. (Hodder & Stoughton, Sevenoaks, 1979. Each 224 pages; many colour and black-and-white illustrations. £4.75 each.) The third and fourth titles to appear in this five-volume series, the first two of which have been reviewed already (*Brit. Birds* 71: 596): they follow the established pattern, with an ecological account followed by illustrated descriptions of the characteristic species of

the various habitats. Both ecological accounts provide good summary descriptions, but inevitably suffer from the brevity imposed by the size of the subject compared with the text space available. This is especially evident in *Fields and Lowlands*, where accounts of all lowland habitats of northwest Europe, ranging from chalk grassland to forest and to farmland, are packed into 60 pages. As in the first two volumes, the species descriptions and illustrations do not nearly match the ecological accounts in quality. This, again, is especially true of the plants, where some of the illustrations are almost unrecognisable. [DAVID STREETER] **Encounters with Nature.** By Leslie Brown. (Oxford University Press, Oxford, 1979. 194 pages; some black-and-white illustrations by Doris Tischler. £6.50.) Stories about animals, including some birds, from an adventurous life, told by a natural story-teller. Marvellous: buy it for relaxing reading. **Birdwatching.** By Eileen Buckle. (Whizz Kids series, Macdonald

Educational, London, 1979. 64 pages; many colour illustrations. Hardback £1.75; paperback 75p.) Sound common sense on how to start birdwatching, suitable for the 10- to 14-year-old. Considerably better than the series-title and the lurid cover portend.

Bird Families of the World. Illustrated by Ad Cameron; edited by C. J. O. Harrison. (Elsevier-Plaidon, Oxford, 1978. 264 pages; many colour paintings. £9.95.) At first sight, this is just another of the recent spate of glossy bird books full of pretty pictures. But it is more than that, for the 42 distinguished authors, under the guiding hand of the consultant editor, Dr Harrison, cover every family of birds, in the Peters sequence, from Archaeopteryx to the crows, jays and magpies. Lay-out and design are excellent and Ad Cameron's lively and accurate paintings succeed both as illustrations of the text and as aesthetically pleasing works of art (naturally, the quality varies, from a marvellous Yellowhammer to a couple of very peculiar Dunnocks). With so many authors, it would be unreasonable to expect the text not to vary in standards: some are gems of concise but interesting summary; others show traces of hurried pot-boiling. On the whole, however, standards both of illustration and of text are high, and this book would form a useful as well as an attractive addition to an ornithologist's bookshelf.

Working bibliography of Owls of the World. By Richard J. Clark, Dwight G. Smith and Leon H. Kelso. (National Wildlife Federation, Washington, 1978. 336 pages. \$9.00.) A cross-referenced bibliography of 6,590 titles of books and articles relating to owls.

Bird Watching for Everyone. By Hockley Clarke. (Gresham Books, Old Woking, 1979. 128 pages; numerous black-and-white plates and line-drawings. £4.50.) Abounding in errors, both major and minor; no-one but a beginner would even consider buying this book, but the approach is not helpful to the beginner.

Animal Migration. By John Cloudsley-Thompson. (Orbis, London, 1978. 120 pages; many colour photographs; maps and diagrams. £5.95.) Despite Professor Cloudsley-Thompson's erudite text, it is probably fair to describe this publication as a superb colour picture-book with an above-average accompanying text, rather than a text-book with first-rate illustrations. A total of 25 pages is devoted to birds, but most of this is (like the rest of the book) taken up with the colour photographs and diagrammatic maps: the text on birds runs to only just over 6,000 words. Despite the wide range of animals covered, errors are few, but it is

interesting to see (map on page 32) that Wilson's Petrels migrate around the north of Ireland and across the Pennines to north Yorkshire!

Birds of the African Waterside. Paintings by Rena Fennessy; text by Leslie Brown. (Collins, London, 1979. 108 pages; 24 colour paintings; many black-and-white drawings. £12.00.) Of the hundreds of birds of the African waterside, 31 are selected for illustration. As is suggested by the sequence of artist and author, Leslie Brown's texts are essentially word pictures to accompany Rena Fennessy's beautiful paintings and even more evocative black-and-white sketches. The pages are unnumbered, presumably to discourage potential purchasers from working out that they will be paying more than 11p per page for this elegant coffee-table book. Someone—either in the publishing house or at the printers—was unable to distinguish a Three-banded Plover *Charadrius tricollaris* from an African Collared Pratincole *Glareola nuchalis*: plates 18 and 24 are transposed.

Bird Watching. By Jim Flegg. (Flying Starts series, Sampson Low, Maidenhead, 1979. 48 pages; many colour illustrations; several line-drawings. £2.50.) For the 10- to 16-year-old. As expected, Dr Flegg's text is helpful and reliable, but the design format (a double-page spread to each subject) is really inappropriate and there are more-useful books for youngsters at around this price.

All the Birds of the Air: the names, lore and literature of British birds. By Francesca Greenoak. (Andre Deutsch, London, 1979. 350 pages; many line-drawings. £6.95.) R. D. McLeod's *Key to the Names of British Birds* (1954) and Christine E. Jackson's *British Names of Birds* (1968) covered much the same ground, similarly listing the local and dialect names and their etymologies, but this book is even more browsable, with some general information and folklore about each species. Despite the wide margins 'considerately provided . . . for any reader who wishes to add extra names or comments', the design is attractive and the price reasonable.

Wood Engravings of Birds. By Christine Jackson We apologise to Robert Gillmor and Mrs Jackson for the fact that the final sentence printed in Robert Gillmor's review (*Brit. Birds* 72: 127) was not as he had written or intended. He was pointing out that she had referred to the illustrations by Tunnicliffe in *Shorelands Summer Diary* as being wood engravings, whereas in fact they are scraperboards; they were not illustrated in the book under review.

Spotter's Guide to Woodland Life. Edited

by **Sue Jacquemier**. Illustrated by John Barber, Joyce Bee, Trevor Boyer, Hilary Burn, William Giles, Victoria Goaman, Andy Martin, Annabel Milne & Peter Stebbing, Chris Shields and Phil Weare. **Spotter's Guide to Animals, Tracks & Signs.** By **Alfred Leutscher**. Illustrated by Chris Shields. (Each book: Usborne, London, 1979. 64 pages; many colour and several black-and-white illustrations. Hardback £1.75; paperback 75p.) These two books are part of a series dealing with various aspects of natural history, aimed at the 8- to 12-year-old. Excellently geared to this age-group, with good illustrations and brief notes of many interesting things to be seen in the countryside, and the opportunity for the young reader to note when he/she has spotted one of the illustrated animals, plants or objects. **Birds of Lake, River, Marsh and Field.** By **Lars Jonsson**. (Penguin Nature Guides, Harmondsworth, 1978. 132 pages; many colour illustrations. £1.95.) The third in this five-volume series, of which the first two were reviewed recently (*Brit. Birds* 71: 595-596). As in the cases of the earlier volumes, the texts are sometimes somewhat inadequate, but the often brilliant paintings amply justify publication: the gentle expression of the female Wigeon and the distinctive character of the Red-footed Falcon, for example. **Gilli the Guillemot.** By **Ann-Mari Lagercrantz**. (Methuen Children's Books, London, 1979. 26 pages; many colour illustrations. £3.60.) Child's picture-story book: bird-ringers, gulls and oil slicks are met and avoided by a young Guillemot. Suitable for the four- to eight-year-old. **Birds of Northern Britain and Northern Europe.** Written and illustrated by **John Leigh-Pemberton**. (Ladybird Books, Loughborough, 1979. 52 pages; many colour illustrations, 40p.) Cheap books to interest children in birds are to be welcomed, but the concept of this one is weird, with Hazel Hen, Crane, Ural Owl, Pygmy Owl, Black Woodpecker, 'Yellow-headed Woodpecker' (= Three-toed Woodpecker), Grey-headed Woodpecker and Siberian Jay, but no indication that these are not found in Britain. Inadequate and uninspired text; mediocre illustrations. **A Bell in its Throat: bird jaunts remembered.** By **Gail Carter Lott**. (Stockwell, Ilfracombe, 1979. 166 pages; 18 black-and-white plates; 5 line-drawings. £4.95.) It is the Bluethroat which is reputed to have 'a bell in its throat'. The sub-title says it all: light-hearted, personal account of trips to southern France, Sweden and Spain. **The Country Life Book of Birds of**

Prey. By **Gareth Parry and Rory Putman**. (Country Life Books, London, 1979. 120 pages; 36 colour plates; several black-and-white plates and line-drawings. £20.) A coffee-table book. The large, full-colour paintings by Gareth Parry will appeal to many people, but lack the 'life and movement' of the five drawings by J. C. Harrison, Eric Ennion and Donald Watson, which have been — perhaps injudiciously — included. The texts are appropriate for the book's format. **The Birds of Suffolk.** By **W. H. Payn**. (Ancient House Press, Ipswich, 1978. 256 pages; 5 colour plates; 21 black-and-white plates. £7.00.) First published in 1962 (see P. A. D. Hollom's review: *Brit. Birds* 55: 593-595), this new edition is 18 pages longer, has more than twice as many photographs and costs more than three times as much. All but four of the plates depict birds rather than habitats (which seems a pity when there are so many books of bird photographs, yet the Suffolk habitats will undoubtedly change as the years go by), and the reproduction of several of those in colour is very poor. More than 80 per cent of the book is taken up with the usual most valuable systematic list, but there are also excellent descriptions of the physical and topographical features of the county and a fascinating chapter comparing the birds and their habitats of 70 years ago with those of today. With the exception of the photographs, the balance of this book is good; bird-watchers living in or regularly visiting Suffolk should all welcome this revised edition. **The Birds of Cornwall and the Isles of Scilly.** By **R. D. Penhallurick**. (Headland Publications, Penzance, 1978. 478 pages; 40 black-and-white photographs; over 170 figures and maps. £11.75.) In his preface, the author notes that: 'sympathetic publishers in 1969 and now (1976) have not rationed my words . . .' A total of 285 pages is devoted to the systematic list and a further ten to appendices and supplements to *Birds of the Cornish Coast* (1969). This volume gives the impression throughout that space had no limits and money was no object. The book also strongly reflects the character and interests of the author, with much historical detail, quotations from ancient manuscripts, and details of famous Cornish ornithologists since Richard Carew (1555-1620). The introduction, covering landscape and topography, extends to a bare 42 pages, which includes, however, a number of useful maps and photographs. A small section covers the 12 principal reservoirs of the county, with large-scale maps of each one. One regrettable omission is a good index: searchers for references to Marazion Marsh, for instance,

will have to peruse every page themselves. **Highland Wildlife.** By **Richard Perry.** (Croom Helm, London, 1979. 202 pages; 16 black-and-white plates; £6.95.) An updated version of his earlier *In the High Grampians*, with evocative, anecdotal descriptions of many aspects of the natural history of central and northern Scotland. **Respiratory Function in Birds, Adult and Embryonic.** Edited by **Johannes Piiper.** (Springer-Verlag, Berlin, Heidelberg and New York, 1978. 310 pages; 147 black-and-white figures. DM58.00; \$29.00.) Papers presented at a symposium held in Göttingen during 28th-30th July 1977. **Bird Flight.** By **Georg Ruppell.** (Van Nostrand Reinhold, Wokingham, 1978. 192 pages; many colour and black-and-white plates and line-diagrams. £15.35.) American translation of Professor Ruppell's *Vogelflug* published in Germany in 1975; the translation reads poorly and there are many type-setting errors. Cannot be recommended, despite the numerous illustrations, especially at the price. [TREVOR POYSER] **Der Weidenlaubsänger.** By **M. Schönfeld.** (Die Neue Brehm-Bücherei, Wittenberg Lutherstadt, 1978. 136 pages; 47 photographs; 58 maps and graphs. DM15.20.) A valuable study of the Chiffchaff, based on a thorough survey of the literature and the author's own intensive studies of territory and breeding. **The Birds of Sussex: their present status.** By **Michael Shrubbs.** (Phillimore, Chichester, 1979. 350 pages; 23 black-and-white plates. £9.75.) As one would expect of a systematic list prepared by Michael Shrubbs, this part of the book (279 pages) is a reliable, interesting and valuable summary of what is known of the 343 species recorded in Sussex up to the end of 1976.

Where appropriate, tables, histograms and maps amplify and illustrate points made in the text. The balance is excellent, with the emphasis being on breeding birds, wintering populations and large-scale passage, and essential details of vagrants, without either padding or excessive summary. This is a model for other authors of county avifaunas to attempt to emulate. Preliminary chapters on geology and land-use, coastland, woodland, heaths and commons, freshwater habitats, urban areas and conservation (all by R. D. M. Edgar) and on farmland (by R. D. M. Edgar and M. Shrubbs) give admirable word-pictures of the county as it is now and of the changes which have taken place. Maps, tables and photographs are used where appropriate. Few books can be so heartily recommended as this: there is hardly a wasted word nor a lost opportunity. Sussex birdwatchers are lucky to have such a book. **The Public Life of the Street Pigeon.** By **Eric Simms.** (Hutchinson, London, 1979. 144 pages; many black-and-white plates; several line-drawings. £6.95.) A popular and in places personal account of the feral and domesticated Rock Dove. Profusely illustrated with black-and-white photographs, but rather unattractive design and rather expensive for a slim volume. This book should, however, be compulsory reading for those who still regard this species as boring and fail to appreciate its importance as an element of our avifauna. **The Nature Detective's Notebook.** By **Ron Wilson.** (Hodder & Stoughton, London, 1979. 156 pages; several black-and-white illustrations. paperback 65p.) Questions and things to do for the 7- to 12-year-old. The conception is a good one, and so are the ideas it contains.

JTRS & SC

Reviews

Bedfordshire Bird Atlas. By **B. D. Harding.** Bedfordshire Natural History Society, Luton, 1979. 144 pages; over 120 maps; 113 line-drawings by Ray Turley. £4.70.

When the BTO and the Irish Wildbird Conservancy launched their atlas survey in 1968, the Bedfordshire NHS decided to carry out its own breeding bird survey on a 2 km × 2 km (tetrad) basis. This attractively produced book is the result; it fills a gap in our knowledge of the avifauna of the South Midlands, for, although one of our smallest counties, no comprehensive account of Bedfordshire's birds has been published for over 70 years. The survey was organised initially by J. N. Dymond, followed by P. F. Bonham and then by B. D. Harding; this book depicts the 15,510 records of 113 species reported during 1968-77.

In a similar manner to other breeding bird atlases, a page is devoted to each species, with a brief text interpreting the accompanying map, the historical background and, for some species, counts of the actual numbers breeding; in addition, for each species there is a small

map showing the national distribution and an attractive line-drawing by Ray Turley. There is an excellent chapter on the effects on bird distribution of various aspects of the county's geology, woodlands, wetlands, mineral workings and farmland, with a good series of maps depicting the geology, wetlands and chalklands, woods and railways, mineral workings and built-up areas, reproduced from John Dony's *Bedfordshire Plant Atlas* (1976), to which this is a companion work.

The map of 'avifauna richness' shows that the number of species recorded for a tetrad varied from 22 to 91, with an average of 47.8: good coverage, except in a few squares in the northwest of the county. It also reveals the importance of the Ouse Valley and its gravel-pits, the clay-pits of the brick companies and the greensand-ridge woodlands, and the paucity of species in the intensively farmed areas.

The individual maps show some surprises to one who knew the county 20 years ago. Decreases in numbers or range of Grey Heron, Redshank and Snipe, undoubtedly due to increased drainage of wetlands; the failure of the Sparrowhawk to recover from the effects of pesticides; and the decline of the Whinchat. Compensation for these losses comes with increases in numbers or range of Great Crested Grebe, Tufted Duck, Little Ringed Plover, Ringed Plover and Common Tern, with occasional nesting by Shelduck, Lesser Black-backed Gull and Herring Gull: all a reflection of the increase in gravel and clay extraction. Introduced species are well represented, with Greylag Goose, Canada Goose, Mandarin, Golden Pheasant and Lady Amherst's Pheasant, as well as the familiar Red-legged Partridge, Pheasant and Little Owl. I was surprised at the lack of records of Great Spotted Woodpecker and Nuthatch in the north.

For the purist, some of the textual accounts are rather padded, and I would have thought that reasonable estimates of population size could have been given for more of the less common birds. Although the Redpoll is said to have increased more than any other species, this record should more properly be accorded to the Collared Dove. The high proportion of probable breeding records for the Corn Bunting is attributed to the distinct song of the male, with no mention of polygamy or the difficulty of actually locating nests. Some of the blank spaces could have been used to give more detail of winter or passage status. It is a pity, in view of the length of the survey, that more observers did not contact farmers and keepers for records of owls, as was done by one enterprising recorder.

The book concludes with a list of additional species present during 1968-77 but not proved to breed, and a list of 257 species recorded in the county, compiled by Barry Nightingale. Let us hope that this chapter is a precursor to a full book on the county's birds.

This atlas provides a historical document valuable for comparative studies in the future. It also highlights the value to wildlife of the man-made habitats, especially where they are close to intensively farmed areas. One hopes that more will be done to establish reserves in the gravel and clay complexes, so that not all are turned over to tipping or the boating and fishing enthusiasts,

F. C. GRIBBLE

A Sketchbook of British Birds. By C. F. Tunnicliffe. Introduction by Ian Niall. Gollancz, London, 1979. 142 pages; 123 colour plates. £7.95.

Almost invariably, I find that an artist's preliminary drawings and preparatory sketchbook work have even more interest and reveal jizz, posture and movement to a greater degree than the finished drawing or painting, however good the latter may be. Looking through an artist's sketchbook provides that fascinating combination of looking at the birds through his eyes and, thereby, into his mind.

Sadly, Charles Tunnicliffe did not live to see the publication of this book (see 'Obituary', *Brit. Birds* 72: 381-384), but the publishers note that he did see some of the colour proofs. His work was admired and respected by his contemporaries and became well-known to a very wide audience through the magazine covers and Christmas cards which he painted for the RSPB. The publication of a selection of pages from his sketchbooks now gives us the opportunity to study the techniques of this Royal Academician.

Every page is a delight. This book is not only for bird-artists, it is for all of us. While I cannot pretend that it is an essential volume for every ornithologist's bookshelf, nevertheless I do recommend that, if you intend to buy just one non-essential bird-book this year, *A Sketchbook of Birds* should be that one. The price is ridiculously low for this superbly printed collection of over 120 colour pages. A book to be bought and treasured.

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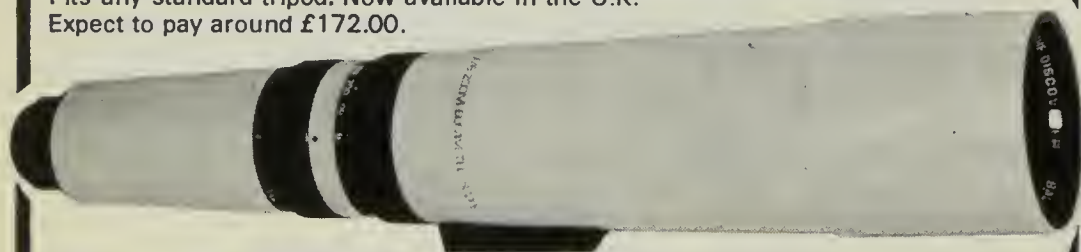
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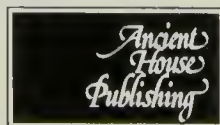
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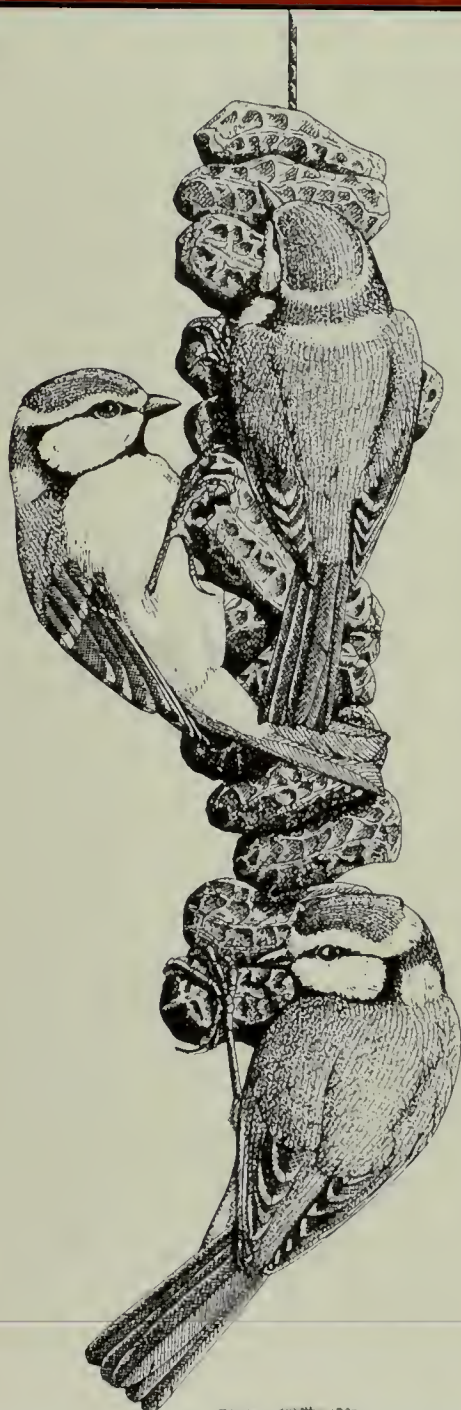
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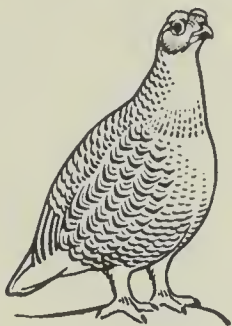
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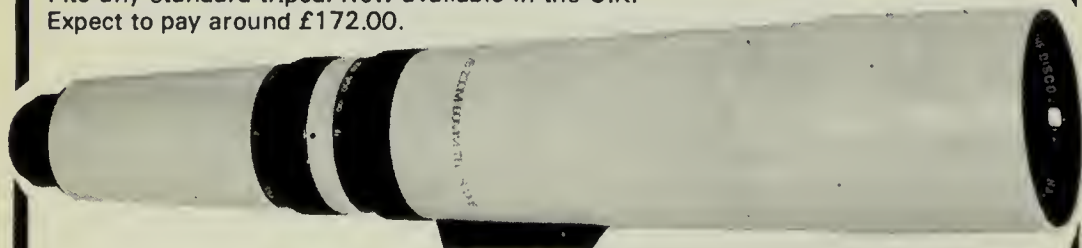
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Sequential breeding by Golden Plovers

Raymond Parr



Individual recognition by plumage and coded colour-ring has led to the discovery of a quite unexpected breeding stratagem

Golden Plovers *Pluvialis apricaria* in northeast Scotland winter on coastal farmland and estuaries and return to the moors in spring to breed. Each breeding pair occupies and defends an area in which the nest is located and the chicks reared. Previously, those not holding a nesting area have been assumed to be non-breeders. Nethersole-Thompson & Nethersole-Thompson (1961) considered the bulk of them to be sexually immature, as Golden Plovers were thought not to breed until their second year. Ratcliffe (1976) suggested that non-breeding flocks in Britain included low-rank individuals excluded by the territorialism of the breeding population. Golden Plovers normally lay four eggs (Ratcliffe 1976) and incubate on average for 30.7 days (Nethersole-Thompson & Nethersole-Thompson 1961). Many nests, however, are robbed before hatching, and second and third replacement clutches have often been recorded. Nethersole-Thompson & Nethersole-Thompson (1961) reported that repeat clutches occurred 12-15 days after robbing, but Ratcliffe (1976) stated that one pair took 24 days to lay a second clutch. Study of colour-ringed individuals,

however, suggests that some of these earlier observations with unmarked birds may have been misinterpreted.

An intensive study of Golden Plovers in northeast Scotland revealed that the number feeding in fields near the breeding grounds on the moorland far exceeded those found nesting. Off-duty individuals accounted for part of this excess, but, in addition, there appeared to be many non-breeders. Two alternative explanations were (1) that Golden Plovers do not breed until their second year, and first-year birds comprise many of these assumed non-breeders, and (2) that the assumed non-breeders are adults unable to breed because areas suitable for breeding are in insufficient supply or because they are unmated due to an unequal sex ratio. In 1974, however, a breeding pair which included a first-year male was later replaced by a second pair and then by a third pair on the same breeding area. This suggested that more than one pair could use the same ground on the moor (henceforth called 'breeding range') at different periods in the breeding season and that so-called non-breeders were merely waiting their turn. Over the next three years, several breeding ranges were studied in detail to check this.

Study area

The study area, at Kerloch in Kincardineshire, was a moor dominated by heather *Calluna vulgaris*, occupying about 1,000 ha on a north-facing hillside and bounded on the lower edge by farmland. The area rises to an altitude of 500 m and the fields lie at 270 m. The area had been managed as a grouse moor for decades, the vegetation being broken up by patches burned in different years in the past, as well as by some largely unburned areas.

The work was carried out between March 1973 and August 1977, the first year being mainly exploratory. The Golden Plovers were present only from mid February to mid August, and spent the rest of their time on wintering grounds elsewhere. The study was divided into two main sections: (1) observations of flocks feeding in the fields, and (2) recording the activities of individuals on their breeding ranges.

Methods

Flocks in the fields were watched from a 'Landrover' used as a mobile hide, and the total numbers of males and females were recorded during each period of observation. The birds were graded from 0 to 7 according to the amount of black on the face, throat and belly, and the extent of the white band bordering the black. The 0 category had no black or white, and 7 represented an extreme *altifrons* or 'northern type'. By observing pairs and watching copulations I found that, at Kerloch, the females were 0-4 and all males 5-7.

About 25% of the birds were colour-ringed (with individual codes) by catching adults on the nest using a drop trap, or by ringing chicks in the nest before they dried off and left. Birds on breeding ranges were observed from hidden vantage points and nests were found by disturbing the plovers and then watching them return.

Results

As the counts in the fields showed more males than females (mean of 14 counts in different years 1.20:1) even before breeding started, unmated males might have formed a small non-breeding group. Possibly some females had two males, but no such triples were ever seen. Some others in the fields were known to be off-duty from eggs or chicks on the moor, but there still remained some pairs which were consistently seen in the fields during the early part of the breeding season and which I did not see on frequent visits to the breeding ranges.

Between 1975 and 1977, 34 individual breeding ranges were closely studied, of which eight were used by more than one pair in the same season. Of the 26 ranges where only one pair occupied each range, the original pair renested in four, seven failed and 15 hatched without being replaced. In all but one breeding range, the second pair did not appear until the first pair had vacated the area.

Case 1 This was occupied by a colour-ringed 1973 male and an unringed female up to 8th May 1974. Although I did not find a nest, the male's behaviour strongly indicated one. On 9th May, both birds were seen flying off and were not seen again on the breeding range, although the male was frequently observed in the fields later. A nest was located on 31st May, in the spot where the first nest had been suspected, but this time the male was unringed. The female was subsequently colour-ringed, and her eggs hatched on 9th June. Several weeks later, on 9th August, an unringed pair was seen within 20 m of the nest, with chicks about 10 days old. The nearest breeding range of a pair was about 1 km away, separated by an expanse of long heather, and was occupied by a brood which hatched on 4th June. After they fledged, no more plovers were seen in the area, so this brood was unlikely to have come from it. Also, other work has shown that broods stay close to the nest during the first three weeks, and it is likely, therefore, that three pairs used this area in 1974.

Case 2 In 1975, the nest of an unringed male found on 5th May was robbed on 12th May, and on 19th May a male with noticeably different plumage was sitting on one egg only 25 m from the first nest. This individual occupied the same ground and used the same lookouts as had the first, until the nest was robbed on 2nd July, when he too left the area.

Case 3 On an area adjacent to case 2, the nest of an old colour-ringed male, found on 26th April 1975, was robbed on 12th May. After the first pair had gone, an unringed male occupied the same breeding range and was found nesting on 25th May just 15 m from

the first nest, but by 3rd June had also been robbed. If the first bird had not been ringed, one might have assumed that the second nest involved renesting by the first pair. Later, on 26th June, a third pair, both of them colour-ringed as 1974 chicks, occupied the same ground, but no nest was found.

Case 4 An old colour-ringed male was incubating on 26th April 1975, and by 12th May the eggs had gone. He left this breeding range to return to the fields and an unringed male was found sitting on eggs on 26th May, but by 3rd June he too had been robbed. The first pair then returned, and by 10th June had laid three eggs; by 2nd July, however, these had also been robbed.

Case 5 An unringed male with distinctive plumage was seen on a breeding range in April 1975 and the nest found on 5th May. After it was robbed on 12th May, no plovers were seen on the area. A brood was, however, noted in June with a different male, and a female recognised from detailed drawings as having been present in this range in 1973 and 1974.

Case 6 A colour-ringed male that had nested here in 1973 occupied and defended two adjacent breeding ranges in 1974 and 1975. His 1975 clutch hatched on 23rd May and on 12th June an unringed male was discovered nesting on the same breeding range. This nest was robbed on 15th June.

Case 7 A pair (both sexes colour-ringed) was found nesting on 22nd April 1976, on the same area that they had used in 1975. The nest was found robbed on 6th May, but the male was still present on 11th May along with a colour-ringed 1974 male and his unringed female. The males were seen fighting

during the day and on 12th May only the second male and his mate remained. Although the new male was seen on several subsequent visits and showed definite signs of having a nest, I suspect that it was robbed before I was able to find it.

Case 8 In 1977, the second colour-ringed male mentioned in case 7 reoccupied his 1976 breeding range and was suspected of having a nest, which by 5th May had been robbed. An unringed pair then appeared on the same

ground and successfully hatched a brood on 3rd July.

Case 9 This was the same breeding range as in case 3 and had been occupied successfully by a colour-ringed male in 1976. In 1977, the first nest was that of an unringed pair found on 25th April and robbed on 5th May. They were replaced by the colour-ringed male and his mate, this pair successfully hatching their eggs on 14th June.

Table 1. Timing of nesting and position in nesting order of individual Golden Plovers
Pluvialis apricaria in different years

Individual	Year	Hatching date	Position in nesting order
A	1976	16th May	1st
A	1977	14th June	2nd
B	1973	22nd May	1st, not replaced
B	1974	robbed 17th June	1st, not replaced
B	1975	brood 17th June	2nd
C	1975	17th June	2nd
C	1976	16th May	1st, not replaced
D	1976	robbed 25th May	2nd
D	1977	robbed 5th May	1st
E	1974	9th June	2nd
E	1975	late May	1st, not replaced

There is not an absolute set order for occupation of a breeding range. A bird that is first one year can be second in the following season, or vice versa (table 1). Further, it is now known that first-years are able to occupy breeding ranges and breed. Since ringing began in 1973, 11 males and four females have been seen paired in their first year. Five of the males and two of the females were later observed with nests or broods. Nor is there any evidence to suggest that first-years are those having to wait, as six of them had breeding ranges in early April.

Discussion

These examples show that a succession of different breeding pairs can occupy a single breeding range within one season; thus, many nests previously described as repeats could have been those of new birds. In the flocks in the fields there is a small number of unmated males, and possibly some pairs that do not breed. The results above, however, refute the idea that the apparent non-breeding flock consists entirely of birds that do not breed all summer. Instead, it is composed at least partly of birds that are waiting their turn to move on to a breeding range. The fact that some of these birds moved on to the breeding ranges so quickly suggests they were in condition to lay within a few days.

If the number of breeding areas is limiting, it should benefit non-breeding pairs to use these after the first pair has left. As the breeding season lasts so long, it is possible for two or even three attempts to be made at breeding by different pairs. Although Golden Plovers are strongly

territorial (i.e. they are dominant over and exclude others from the territory) before and during incubation, once the chicks have hatched this activity ceases, thus giving other individuals the opportunity to move in. Although the newcomers are not hostile towards other Golden Plovers with families, they do attack and eject others which do not have chicks. When threatened by a predator, the nesting individuals and those with chicks on the same territory often combine forces. Thus, breeding pairs appear to compete only with those nesting at the same time. The members of an incubating pair do not feed on the territory and therefore offer no threat to the brood. Likewise, the chicks of the first pair will not compete with the second brood, since they will have fledged by the time that the second pair's clutch hatches.

Acknowledgements

I am grateful to Dr Adam Watson and Dr David Boag for their valuable comments on the manuscript.

Summary

Detailed observations of breeding Golden Plovers *Pluvialis apricaria* in northeast Scotland, identified individually by plumage and coded colour-ringing, shows that the same breeding range can be occupied, in sequence, by more than one pair during the summer, and that flocks of 'non-breeders' are at least partly composed of individuals 'waiting their turn' to nest.

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Report on rare birds in Great Britain in 1978

Michael J. Rogers and the Rarities Committee

This is the twenty-first report of the Rarities Committee. Details of committee membership and other matters relating to its work during the year have already been published (*Brit. Birds* 72: 487-488).

The number of submissions was again at a high level, but only seven-tenths of the record 1977 total: 665 (82%) were accepted. Largely through the efficiency of MJR's secretaryship, the committee has been able to keep abreast of the heavy flow of records, and it has been possible to defer the drastic cut in the number of species on the committee's list which seemed imminent a year or two ago.

The year summary and species comments have been prepared by J. N. Dymond: a past secretary of the committee, we welcome his renewed

involvement in our work. As usual, the species comments include the accepted Irish records, which are adjudicated by the Irish Records Panel and published annually in the *Irish Bird Report*. We are grateful for permission to repeat them here, and thank J. Fitzharris, the Panel's honorary secretary, for supplying details of the records. D. J. Britton has again compiled the running totals of records which appear in brackets after each species name: these and other details of the report's presentation are explained on pages 507-508.

During 1978, there were reports in Britain of three species new to Britain and Ireland: Greater Sand Plover *Charadrius leschenaultii*, Semipalmated Plover *C. semipalmatus* and Pallid Swift *Apus pallidus*. Only the first two of these have so far been formally admitted to the British and Irish list after consideration by the BOU Records Committee.

As usual, the completeness and accuracy of this report has been due to the valued co-operation of the county and regional recording bodies, the bird observatories and many other people who have readily provided information or advice. M. D. England, avicultural adviser to the committee since 1971, has as usual provided information on escapes and introductions. P. R. Colston, Derek Goodwin, P. J. Hayman, A. R. Kitson, J. H. Marchant, M. A. Ogilvie, R. F. Porter, A. J. Prater, I. S. Robertson, Will Russell and D. I. M. Wallace have given their expert advice on species with which they are specially familiar, and this is gratefully acknowledged. We urge photographers to remember to send their rarity photographs to MJR for possible inclusion, and we thank those whose work enhances this report.

All records should be sent to the honorary secretary, Michael J. Rogers, 195 Vicarage Road, Sunbury-on-Thames, Middlesex TW16 7TP, preferably via the appropriate county or regional recorder (see *Brit. Birds* 72: 446-449), with whom new systems for improved liaison with the committee are now operating. A copy of the list of species considered by the committee (67: 347-348, but note that Long-tailed Skua *Stercorarius longicaudus* will come off the list at the end of 1979, 72: 488) can be obtained from MJR, as can copies of the 'Unusual report' form: the latter should be used, or its format followed, when submitting reports, as it makes record assessment easier.

PJG

Summary of the year

A tailpiece to the events of 1977 was the discovery in November of three Ring-necked Ducks, followed by a further eight in December. January 1978 saw the appearance of three more Ring-necked Ducks, and, also of Nearctic origin, a Ring-billed Gull, a Surf Scoter in Co. Donegal and a Long-billed Dowitcher, while from the south came a single Serin and from the east came a Great Bustard and two Lesser White-fronted Geese (these last in Northumberland, moving to Galloway in February). The icing on the cake was, fittingly, from the high Arctic: an Ivory Gull in Norfolk. February saw a continuing scatter of Nearctic ducks, in the form of three more Ring-necked Ducks, two Green-winged Teals and a single Blue-winged Teal, as well as a Killdeer, another Serin and a tideline White-billed Diver.

Transatlantic arrivals continued to provide the highlights in March, with the eighteenth Ring-necked Duck of the winter, three more Green-

winged Teals, another Long-billed Dowitcher and another Ring-billed Gull. Three Cranes in eastern counties, the first White Stork of the year and a very early Alpine Swift in Co. Dublin complete the picture. April started quietly, with the only American Wigeon of the first half-year, the first two of five Ring-billed Gulls during the month at the original West Glamorgan haunt of the species, a Little Bunting in Surrey and an Alpine Accentor in Dorset. Then came several White Storks and Cranes and the first of the spring herons, a Little Bittern in fact, closely followed by a Night Heron. A good variety of rarities of southerly or southeasterly origin arrived during the last ten days of April, including another Little Bittern, another Night Heron, several Purple Herons, a Black Stork, a Gull-billed Tern, a Great Spotted Cuckoo, an Alpine Swift, the second British Calandra Lark (on Fair Isle), a Red-rumped Swallow, odd Short-toed Larks, several Serins and another Alpine Accentor. A Greater Yellowlegs was found in Co. Cork at the end of the month.

As always, May was a productive month, full of surprises, the first of which was an eastern Stonechat in Humberside. Two White-billed Divers in breeding plumage in Shetland preceded an influx of good birds farther south, which included a small scatter of herons, odd White Storks and Cranes, a Woodchat Shrike, a Great Reed Warbler, a Black-headed Bunting, a Thrush Nightingale, a few Red-footed Falcons and a Broad-billed Sandpiper. Mid-month excitement took the form of a Pallid Swift (in Kent), which awaits ratification and admission to the British and Irish list, although, no doubt, the many hundred pilgrims to Stodmarsh are well satisfied already. They had ample opportunity while there to study the consolidating breeding population of Savi's Warblers, which also showed well in many other localities in southern England. Another southern species with an even more precarious foothold in southern counties is Serin, and a dozen or so were recorded during May. The varied arrivals of mid May included two Laughing Gulls, the first of three spring Collared Pratincoles, another Broad-billed Sandpiper, three Rustic Buntings, single Whiskered and Gull-billed Terns, and, to Cornwall, perhaps the most unexpected vagrant, a Rufous Turtle Dove. The last ten days saw a flurry of activity with, from southern climes, two Bee-eaters, a Roller, three more Great Reed Warblers, a Subalpine Warbler and a Lesser Grey Shrike, while from the east or southeast came a Caspian Tern, a Thrush Nightingale, two more eastern Stonechats (in Humberside and Lincolnshire), a Pied Wheatear in Norfolk, a Saker in Shetland, a Sociable Plover in Nottinghamshire and a Terek Sandpiper in Essex. Nearctic species were represented by a Buff-breasted Sandpiper in Shetland.

The scatter of overshooting southern rarities continued throughout June, with a few Purple Herons and Red-footed Falcons, four Night Herons, three Great Reed Warblers and four Alpine Swifts, and singles of the rarer Great White Egret, Black Kite and Black-winged Stilt (the last commuting twice between West Sussex and the Kent/East Sussex border). That most immaculate of wagtails, a male Black-headed, reached Cornwall. Further Rustic and Black-headed Buntings, several shrikes and pipits, a Greenish Warbler and four Scarlet Rosefinches were among passerine arrivals, and

representing North America were a White-throated Sparrow, a Wilson's Phalarope and a White-rumped Sandpiper. Two Cranes appeared in Orkney and stayed throughout the summer, and the north isles also produced another White-billed Diver. July was typically quiet, with just a sprinkling of southern rarities, including another Black-winged Stilt, and four Nearctic waders (one each of Buff-breasted, Baird's and White-rumped Sandpipers, and a dowitcher). Perhaps most noteworthy was a freshly dead Brünnich's Guillemot on the shore of eastern Scotland, exactly a year after three most fortunate observers saw a live one on the Farne Islands, Northumberland.

August was a rather unremarkable month for rarities, and, for that matter, for more common migrants too. Persistent westerly weather produced a variety of American waders, most notable being three Spotted Sandpipers (in Scilly) and a Greater Yellowlegs (in the Hebrides). There were six White-winged Black Terns (after a blank spring) and 24 or so Long-tailed Skuas. Passerines were represented by ten Aquatic Warblers, two Greenish Warblers and one or two of the regular oddments.

As the westerly-dominated weather continued through September, so did the transatlantic flight of waders, but Buff-breasted Sandpipers totalled just seven in the month. The same number was reached by White-rumped Sandpipers (six of them in Ireland), and there were three Lesser Golden Plovers, three Wilson's Phalaropes, four dowitchers (one identified as Long-billed), one Least Sandpiper, just one Lesser Yellowlegs and three more Spotted Sandpipers. Also from North America came two Laughing Gulls, a Common Nighthawk (in Orkney), a Red-eyed Vireo (on Cape Clear Island), three Blue-winged Teals and the first of the back-end Ring-necked Ducks. Seawatching produced eight Cory's Shearwaters, two Little Shearwaters, 27 Long-tailed Skuas and, between Cornwall and Scilly, a Black-browed Albatross. Shetland almost monopolised the passerine vagrants from Siberia and Europe, the exceptions being a Booted Warbler on Humberside, two Scarlet Rosefinches, two Aquatic Warblers, a handful of Tawny Pipits, a Yellow-breasted Bunting on the Isle of May and an Arctic Warbler in Caithness. To Shetland came a Pechora Pipit, six Richard's Pipits, three Lanceolated Warblers (with a fourth on an oil-rig in the North Sea), two Arctic Warblers, 13 or so Scarlet Rosefinches, a Little Bunting, six Yellow-breasted Buntings, a Short-toed Lark and an eastern Stonechat.

In October, attention tends to switch from the far north to the far southwest, and in 1978 there was reward indeed. Topping the bill in Scilly was the first British record of Semipalmated Plover, with a supporting cast from across the Atlantic of a Red-eyed Vireo, a Lesser Golden Plover (with another in Cornwall), a sixth Spotted Sandpiper and a Long-billed Dowitcher. Nearctic vagrants elsewhere included a selection of ducks, a good assortment of waders, with the rarest being a Semipalmated Sandpiper, two Yellow-billed Cuckoos (Humberside and Lincolnshire) and a Black-and-white Warbler on Cape Clear Island. At the same time, vagrants from Siberia and central Asia were well represented, starting with a Red-breasted Goose, and then two Sociable Plovers, 17 Richard's Pipits

and an Olive-backed Pipit, no less than six eastern Stonechats and three Isabelline Shrikes, single Eye-browed and Black-throated Thrushes, a Citrine Wagtail, two Radde's Warblers and the first of the only two Pallas's Warblers of the year. Perhaps mostly of less distant origin were singles of Red-flanked Bluetail, Desert Wheatear, Greenish Warbler and Arctic Warbler, a Rose-coloured Starling, two Nutcrackers and three each of Rustic and Little Bunting.

Apart from a lone Dusky Warbler in Kent, a Black-throated Thrush lurking in Staffordshire and the second Pallas's Warbler (a Kent monopoly in 1978), November almost slipped by unnoticed, enabling many twitchers to save hard for their petrol; and, sure enough, it was needed in December with the discovery of yet another first for Britain: a Greater Sand Plover in West Sussex, which stayed through to the New Year. The incidence of Ring-necked Ducks was building up again and there were one each of Black Duck, American Wigeon, Green-winged Teal and Ring-billed Gull, a dozen Cranes and the only Gyrfalcon of the year. Finally, the fourth species new to Britain and Ireland in 1978, a Belted Kingfisher, turned up in Co. Mayo, but just after the news filtered through and telephones started ringing all over the country came an extra bulletin announcing that it had been shot.

So, it was a strange year, with many of the lesser rarities in short supply, notably the southern herons, the terns and Aquatic Warblers, hardly any Asian warblers, and no mass flight of Nearctic waders. On the plus side, particularly, were the North American wildfowl and a healthy crop of Savi's Warblers and Serins.

Included in the following systematic list of records are four 1977 additions to the British and Irish list, Eleonora's Falcon, Rüppell's Warbler, Cape May Warbler and White-crowned Sparrow, and also a 1977 Isabelline Wheatear, the first this century. Also included are three 1978 additions to the list, Semipalmated Plover, Greater Sand Plover and Belted Kingfisher, with a potential fourth, Pallid Swift *Apus pallidus*, awaiting ratification. What will appear in 1979 and 1980? A good bet would be another Nearctic wader or warbler, or perhaps from the distant southeast a Spur-winged Plover *Hoplopterus spinosus*, Green Warbler *Phylloscopus nitidus* or White-throated Robin *Irania gutturalis*, but the writer would be most pleased by a waif from Siberia: how about a Siberian Accentor *Prunella montanella*? JND

Systematic list of accepted records

The principles and procedure followed in considering records were explained in the 1958 report (*Brit. Birds* 53: 155-158). The systematic list is set out in the same way as in the 1977 report (71: 481-530); the following points show the basis on which the information has been put together in the list.

- | | |
|---|--|
| <p>(i) The details included for each record are (1) county; (2) locality; (3) number of birds if more than one, and age and sex if known (in the case of spring and summer records, however, the age is normally given only where the</p> | <p>bird concerned was not in adult plumage); (4) if trapped or found dead, and where specimen is stored, if known; (5) date(s); and (6) observer(s) up to three in number, in alphabetical order. In accordance with our</p> |
|---|--|

declared policy (see *Brit. Birds* 68: 1-4), the new county names have been used, and observers are asked to bear this in mind when submitting records.

(ii) In general, this report is confined to records which are regarded as certain, and 'probables' are not included. In the case of the very similar Long-billed *Limnodromus scolopaceus* and Short-billed 'Dowitchers' *L. griseus*, however, we are continuing to publish indeterminable records, and this also applies to observations of the two pratincoles *Glareola* and of such difficult groups as albatrosses *Diomedea* and frigatebirds *Fregata*.

(iii) The sequence of species, vernacular names and scientific nomenclature follow *The*

British Birds' List of Birds of the Western Palearctic (1978). Any sight records of subspecies (including those of birds trapped and released) are normally referred to as 'showing the characters' of the race concerned.

(iv) The three numbers in brackets after each species name refer respectively to (1) the total to the end of 1957, (2) the total for the period since the formation of the Rarities Committee in 1958, but excluding (3) the total for the current year. A detailed breakdown of the figures for previous years is held by the honorary secretary.

(v) The world breeding range is given in brackets at the beginning of each species comment.

White-billed Diver *Gavia adamsii* (18, 37, 4)

Highland Golspie, adult, newly dead, 8th February (Mrs M. Hall, A. R. Mainwood), now at Golspie High School.

Shetland Near Haaf Gruney, adult, 3rd May; another near Fetlar, 3rd May (J. N. Dymond, R. J. Tulloch) (plate 215). 11 km north of Fair Isle, adult, 6th June (C. Byers, M. S. Chapman).

1975 Western Isles South Uist, adult, 31st March (D. J. Pitman, W. M. Underwood).

(Arctic Russia, Siberia and Alaska) There have now been eight records in Shetland waters in May or June in the last ten years: the Haaf Gruney individual was in exactly the same spot as that on 1st May 1977 (*Brit. Birds* 71: 487).



215. Adult White-billed Diver *Gavia adamsii*, Shetland, May 1978 (R. J. Tulloch)

Black-browed Albatross *Diomedea melanophris* (2, 18, 2)

Kent Foreness Point, 16th December (D. C. Gilbert, W. G. Harvey *et al.*).

Scilly 8 km NE of St Mary's, apparent adult, 20th September (N. A. Preston, A. D. Warren); possibly another, 5.5 km NE of St Mary's, 16th October, apparently showing sub-adult characters (I. Burrows, A. J. Prater, S. M. Whitehouse *et al.*).

Shetland Hermaness, Unst, 23rd March to 3rd September (D. Smith, I. Spence, R. J. Tulloch *et al.*) (plate 149), also seen Yell Sound, 21st and 26th July (Leicester Polytechnic Expedition per J. D. Okill).

(Southern oceans) The sixth consecutive year that an adult has stayed among the Gannets *Sula bassana* at Hermaness, Shetland. The Kent individual is the first December record of any albatross.

Bulwer's Petrel *Bulweria bulwerii* (2, 2, 0)

(Oceanic islands of North Atlantic and Pacific, nearest Madeira and Azores) A 1975 record has just been accepted by the Irish Records Panel:

one off Cape Clear Island, Co. Cork, on 3rd August; the only other recent record was at the same locality on 26th August 1965.

Cory's Shearwater *Calonectris diomedea* (a few, 1,666, 22)

Cornwall St Ives, 29th September (P. R. Wilcox).

Devon Prawle Point, 29th June (J. C. Nicholls).

Dorset Portland, two, 24th June (D. C. Palmer, N. Powell).

East Sussex/Kent Rye Bay, 13th April (K. Redshaw); 5th May (K. Redshaw).

Essex Foulness, 24th September (R. Glover).

Fife Fife Ness, two, 15th April (A. Brown).

Kent Minnis Bay, 1st October (W. G. Harvey).

Norfolk Winterton, 30th August, passing N, 06.34 GMT (P. R. Allard). Cley, 30th August, passing W, 12.15 GMT (S. D. Enright); two, 2nd September (G. E. Dunmore, S. C. Joyner, N. Williams). Salthouse, 7th September (Rev. A. M. Handley). Holme, two, 18th September (E. C. B. Newman).

North Yorkshire Filey Brigg, 25th June (A. Botterill, H. J. Whitehead).

Strathclyde Turnberry Point, 11th June (A. Brown, R. H. Hogg).

1977 Shetland Out Skerries, 28th September (D. Coutts, J. D. Okill).

(East Atlantic and Mediterranean) Also one off Brandon Point, Co. Kerry, on 8th September and two off Cape Clear Island, Co. Cork, on 27th July. As in the preceding two years, most records were from the English east and south coasts.

Little Shearwater *Puffinus assimilis* (5, 42, 2)

(Atlantic south from Madeira and Caribbean, and southern oceans) None in Britain, but one off Cape Clear Island, Co. Cork, on 24th September was joined by a second on 25th, both remaining until 28th. A total of 13 British records during 1978 is still under consideration.

American Bittern *Botaurus lentiginosus* (50, 5, 0)

1977 Cornwall Marazion Marsh, 7th to 25th September, moved to St Erth, 18th to 19th (B. Cave, G. W. Davis, G. & Mrs J. Dormer).

(North America) The first in Britain since 1962, although there were singles in Ireland in 1970 and 1973. Nearly all the records are in autumn.

Little Bittern *Ixobrychus minutus* (150, 116, 4)

Central/Strathclyde Loch Lomond, ♂, 5th June (I. P. Stevenson).

Humberside East Halton, ♂, 19th to 29th April (K. Atkin, D. Baker, G. P. Catley *et al.*).

Norfolk Cley, ♀, 5th to 6th August (D. J. Holman, P. Holness, Rev. D. Thornton *et al.*).

1976 Lincolnshire Birchwood, juvenile, found dying, 26th to 27th August (R. Arden, T. Kerry).

(West Eurasia, Africa and Australasia) Also one at Myrtleville, Co. Cork, on 22nd April. A below-average showing of this notoriously skulking reed-bed species.

Night Heron *Nycticorax nycticorax* (165, 85, 7)

Cambridgeshire Ouse Washes, adult, 8th June (C. A. Carson, L. Street).

Hereford & Worcester Locality withheld, adult, 17th to 22nd June (D. A. N. Asterley, A. Darlington, H. Green *et al.*).

Kent Richborough, adult, 4th June (D. M. Batchelor, C. P. Solly). Sevenoaks, second-year, 17th July (M. Coath, the late Dr J. G. Harrison *et al.*).

Suffolk Holbrook Bay, adult, 14th June (C. Morris).

Wiltshire Coate Water, adult, 20th April (R. Boatsen, R. Marshall).

(South Eurasia, Africa and the Americas) Also one on Cape Clear Island, Co. Cork, on 24th April. The usual scatter of adults, but only one immature contrasts with five in 1976 and four in 1977.

Little Egret *Egretta garzetta* (23, 211, 4)

Dorset Lodmoor, 4th to 6th May (M. Cade, C. Cook *et al.*); probably same, Stanpit Marsh, 7th May (P. Morrison).

Essex Foulness, 14th May (R. Glover).

Norfolk Winterton, 3rd August (R. Cobbold, M. Fiszer).

Warwickshire Brandon Marsh, 29th May (J. E. C. Baldwin, D. Jones).

1977 Dorset Lodmoor, 4th June (M. Cade *et al.*), possibly same as that at Poole, 16th June to 3rd September (*Brit. Birds* 71: 489).

1977 Suffolk Minsmere, 2nd May (*Brit. Birds* 71: 489), also 3rd May (per A. R. J. Paine).

(South Eurasia, Africa and Australia) The second successive year that this species has been rather scarce. As usual, sight records do not exclude the similar Nearctic species, Snowy Egret *E. thula*.

Great White Egret *Egretta alba* (10, 6, 1)

Grampian Loch of Strathbeg, 23rd to 28th June (C. G. Hancock, A. R. Kitson, B. J. Stewart *et al.*).

(Almost cosmopolitan, extremely local in Europe) There was none between 1958 and 1973, then four in 1974 and two in 1977. This recent flush of records seems likely to be connected with the recent colonisation of the Netherlands (*Brit. Birds* 72: 275).

Purple Heron *Ardea purpurea* (90, 233, 18)

Buckinghamshire Newport Pagnell, immature, 28th May (H. Mayer-Gross).

Cambridgeshire Ouse Washes, 18th to 31st August (D. Allen, C. A. Carson, C. Denby *et al.*).

Devon Lundy, 24th to 28th April (M. Rogers, A. M. Taylor). Slapton Ley, 6th to at least 29th May (M. R. Edmonds, G. Rayner, J. Warne *et al.*).

East Sussex Cuckmere, adult, 5th to 6th May (M. J. Rogers *et al.*).

Essex Rainham, 26th May (J. Wright).

Hertfordshire Tring Reservoirs, juvenile, 30th August (B. L. Sage).

Humberside Tophill Low Reservoir, 26th April (P. Bishop, H. McClarron). Blacktoft Sands, adult, 8th June (A. Grieve).

Kent Sandwich Bay, immature, 20th April (D. C. Gilbert) and 29th April (D. C. Gilbert, D. B. Rosair *et al.*), perhaps two involved. Fordwich, adult, 25th May (W. G. Harvey). Grove Ferry and Stodmarsh, adult, 29th to 30th June (R. J. Fearn, R. A. Rackliffe). St Margaret's Bay, 17th October (I. P. Hodgson). Elmley, immature, 13th November (J. N. Dymond).

Mid Glamorgan Kenfig Pool, 24th April to 7th May (S. J. Moon, A. Morgan *et al.*).

Norfolk Snettisham, immature, 24th to 26th August (P. R. Jepson *et al.*).

Nottinghamshire Carburton Lakes, adult, 6th June (J. Hornbuckle).

Suffolk Minsmere, adult, 13th May (R. K. Coles, R. H. Lawrence, P. J. Lloyd).

1968 Norfolk Cley, 25th April to 2nd May (D. J. Holman); adult, 13th May (the late R. A. Richardson).

1970 Norfolk Cley, at least 24th May (D. J. Holman), considered additional to individual at least 31st May (*Brit. Birds* 65: 350).

1977 Humberside Tophill Low Reservoir, 22nd May (P. Dove).

1977 Norfolk Waxham, immature, 25th September (R. A. Butler).

1977 Scilly St Mary's, 26th April to 9th June (D. S. Flumm, D. B. Hunt *et al.*).

(South-central Eurasia, north to Netherlands, and Africa) Slightly fewer than in most years.

Black Stork *Ciconia nigra* (26, 15, 1)

Norfolk Cley, 28th April (G. P. & M. P. Lee).

1977 Lancashire Leighton Moss, 27th August (K. D. Robertson) and Kellet, 28th August (Dr P. J. Shepherd).

(Iberia, and Eurasia from Germany to China, also southern Africa) Formerly extremely rare, this species has now occurred in five consecutive years, perhaps connected with an apparent recent extension northwards and westwards in the breeding range in Europe: first breeding in France in 1976 and 1977 (*Brit. Birds* 71: 255).

White Stork *Ciconia ciconia* (70, 161, 14)

An escapee from Nieupoort Zoo, Netherlands, in spring 1978, with ring number A070 on left leg and two damaged primaries in the left wing, was firmly identified at Hambledon, Leicestershire, on 28th to 29th June, near Reading, Berkshire, on 7th to 11th August, Ashburnham, East Sussex, on 30th September to at least 17th December and probably at Barnham, West Sussex, on 13th September. It was eventually found dead at South Heighton, near Newhaven, East Sussex, on 17th January 1979. With the possible exception of the Mid Glamorgan individual, its wanderings appear not to have involved the following:

Clwyd Near Chirk, 4th March to 3rd April (A. Adams, M. Garner, K. W. Horton *et al.*), is thought to have wintered in the area.

Cornwall Tregony, near Truro, 10th to 11th April (Mr & Mrs W. D. Green), probably same as Devon individual, 14th April. St Mawgan, 5th June (Senior Aircraftsman N. Hughes).

Cumbria Shap, 29th May (Miss R. Pheasey, B. J. Rafferty), probably same as Lothian individual.

Derbyshire Ambergate, 8th to 9th April (J. Cole, G. Maloney, T. G. Smith).

Devon Torquay, 14th April (Mr & Mrs A. Radford), probably same as Cornish individual 10th to 11th April. Torquay, 16th May (D. M. Norman).

Dumfries & Galloway Newton Stewart, 5th May (B. Unwin), probably same as Northumberland individual.

East Sussex Rye, 13th June (R. J. Eagling, Mrs D. Herlihy), probably same as Kent individual: wing damage similar.

Highland Near Castletown, Caithness, 22nd May (Mrs P. M. Collett, S. A. M. Manson). Near Poolewe, Wester Ross, 1st August (C. A. & L. S. Stendall).

Kent Near Ashford, 4th to 14th July (P. J. Grant *et al.*), wing damage similar to East Sussex individual, ring on right leg precludes Dutch escapee. Sevenoaks, 30th July (the late Dr. J. G. Harrison), presumed the same.

Lothian Leith, Edinburgh, 28th May, passing SW (J. M. Dickson), probably same as Cumbria individual.

Mid Glamorgan Gelligaer, 17th August (D. M. Williams), possibly same as Dutch escapee: primaries in left wing damaged.

Northumberland Tarsset, 9th to 13th May, and Ottershaw, 16th (J. R. & L. G. Glass *et al.*), probably same as Dumfries & Galloway individual.

Scilly St Agnes, 1st August (Mrs R. E. Parslow).

Strathclyde Crosshill, 23rd April, and Maybole, 24th (R., M. & A. Baird, A. McFadzean, G. S. Riddle). Probably same, Islay, 25th April to 8th May (C. C. Booth, R. Hodgkinson, Mrs M. Steel).

West Sussex Goring-by-Sea, 31st December, passing W (J. A. Feest), probably same as individual at Farlington Marsh, Hampshire, 1st January 1979.

1976 Lincolnshire Gibraltar Point, 1st June (P. A. Hyde): previously rejected (*Brit. Birds* 70: 449), but now accepted on further evidence.

1977 Cornwall St Mawgan, 21st May (Senior Aircraftsman N. Hughes), possibly same as Devon individual below.

1977 Devon Plymouth, about 19th May (J. G. Boswall *et al.*), possibly same as Cornish individual above.

1977 Dumfries & Galloway Breconside, 1st to 4th May (P. Gordon-Duff-Pennington, Miss A. Harding).

1977 Essex Ramsden Heath, 9th to 22nd June (J. R. Northwood), possibly same as Rowhedge individual, 26th June (*Brit. Birds* 71: 491).

1977 Kent Near Faversham, 8th June (A. & N. Cork), probably one of Eastry individuals, 29th May to 3rd June (*Brit. Birds* 71: 491).

(Central and south Europe, southwest Asia and northwest Africa) Also one at Youghal, Co. Cork, on 1st May. The habitual wanderings of this species make interpretation of all the sightings difficult, but the calculated total is near the average for the last ten years.

Glossy Ibis *Plegadis falcinellus* (many, 20, 1)

Kent Swale, 1st January; Stodmarsh, 7th January to 14th May; Westbere, 10th June; Isle of Sheppey, 28th August; Minster, 3rd September; Ash Level, 4th September, and Stodmarsh, 9th to end of year. All relate to individual first seen 14th December 1975 (*Brit. Birds* 69: 330) (per D. W. Taylor).

Scilly Tresco, 21st August to 17th September (D. B. Hunt, W. E. Oddie *et al.*).

1976 Humberside Hornsea Mere, 16th May (J. Beaumont, D. B. Beeves, H. C. Laidlaw *et al.*).

1977 Kent Stodmarsh and area (*Brit. Birds* 69: 330), also seen at Stodmarsh, 30th April (T. A. Guyatt *et al.*).

(Cosmopolitan; nearest breeding colonies in Balkans) The surge of annual records since 1972—after only seven during 1958-71—continues, with the Kent individual in its fourth year of sojourn.

Lesser White-fronted Goose *Anser erythropus* (47, 54, 3)

Dumfries & Galloway Caerlaverock, two adults, 19th February (T. Francis, J. Selwyn), presumed same as Northumberland individuals.

Gloucestershire Slimbridge, adult, 30th December (K. Lane, B. J. Short); adult, 5th February, though showing characters of this species, was too large and was considered to be hybrid with European White-fronted Goose *A. albifrons* (M. A. Ogilvie).

Lancashire Little Crosby, adult, 8th January (L. G. Blacow, M. Jones *et al.*), first seen 28th to 29th December 1977, see below.

Northumberland Budle Bay, two adults, 15th to 22nd January (M. A. Blick, T. Francis *et al.*), presumed same as Dumfries & Galloway individuals.

1977 Lancashire Little Crosby and Great Altcar, adult, 28th to 29th December and last seen 8th January 1978 (L. G. Blacow *et al.*).

(Northeast Europe and Siberia) Several typical midwinter occurrences, but, in addition, records were received of free-flying adults of suspect origin at Elvaston Quarry, Derbyshire, on 7th May and at Rostherne Mere, Cheshire, from 21st June 1976 to 7th January 1977. The possibility that the latter was the same as the Lancashire individual of the subsequent winter cannot be excluded.

Brent Goose *Branta bernicla* (1, 1, 1)

Individuals showing the characters of the North American and East Siberian race *B. b. nigricans*, colloquially known as the Black Brant, were recorded as follows:

Essex Leigh-on-Sea, 5th to 12th January (C. D. Jolly). Harwich-Dovercourt area, see Suffolk.

Suffolk Trimley Marshes, 7th January to 4th February, occasionally flying into Harwich-Dovercourt area, Essex (M. C. Marsh *et al.*).

1975 Suffolk Nacton, 22nd and 28th December (M. C. Marsh *et al.*).

1976 Suffolk Trimley Marshes, 18th February (M. C. Marsh *et al.*), probably same as 1975 individual.

1977 Suffolk Trimley Marshes, 7th to at least 12th February (*Brit. Birds* 71: 492), last seen 2nd March (per M. C. Marsh).

(North America) The Suffolk bird is regarded as that seen at the same locality in February 1976 and February to March 1977, while the Essex one is not far from Foulness, where the first record of this distinctive race was seen in February 1957 and February 1958. How long do Brent Geese live?

Red-breasted Goose *Branta ruficollis* (15, 9, 1)

Humberside Spurn, adult, 1st October (B. Caffrey, J. Cudworth, Mr & Mrs C. Massingham *et al.*).

Kent Westbere and Sturry, adult, 21st to 23rd October (W. G. Harvey, A. C. B. Henderson, A. W. Thorpe *et al.*).

Lincolnshire Covenham Reservoir, adult, 1st October (B. M. Clarkson).

(West Siberia) Most records have been in December to March, but these three, presumed to relate to one individual, are perhaps the result of westwards displacement after the onset of autumn migration from the breeding grounds.

American Wigeon *Anas americana* (22, 79, 3)

Avon Chew Valley Lake, adult ♂, 10th December to 20th January 1979 (A. H. Davies, K. E. Vinicombe *et al.*).

Grampian Near Loch of Strathbeg, ♀, 4th April (D. I. M. Wallace).

Hampshire Titchfield Haven, adult ♂, 27th October (R. W. Andrews, R. A. Chapman, B. S. Duffin).

1966 Highland Inverness, ♂, from 16th December (*Brit. Birds* 61: 336), last seen 24th March 1967 (D. J. Holman).

1967 Highland Inverness, ♂, first seen 16th December 1966 (*Brit. Birds* 61: 336), last seen 24th March (D. J. Holman).

1974 Grampian Near Loch of Strathbeg, ♀, 21st to 22nd March (D. I. M. Wallace).

1977 Kent Sandwich Bay, ♀, 11th April to 2nd May, and Westbere, 23rd May (W. G. Harvey, N. V. McCanch, D. B. Rosair).

(North America) The least showing since 1972 and, in the light of the numbers of Green-winged Teals *Anas crecca carolinensis*, Blue-winged Teals *A. discors* and Ring-necked Ducks *Aythya collaris*, most surprising.

Teal *Anas crecca* (13, 98, 13)

Drakes showing the characters of the North American race *A. c. carolinensis*, colloquially known as the Green-winged Teal, were recorded as follows:

Central River Forth, Stirling, 19th February (D. Thorogood).

Cheshire Sandbach, 25th March to at least 16th April (G. G. M. Williams *et al.*); same, Frodsham, 30th April (S. W. Holmes, D. Roberts). Rostherne Mere, 18th November (J. P. Guest, R. J. Walker, T. H. Wall).

Cornwall Hayle individual first seen 5th November 1977 (*Brit. Birds* 71: 493) remained until at least 5th February; two, 5th February (L. P. Williams *et al.*); 28th October to at least January 1979 (S. M. Christophers *et al.*).

Dorset Radipole, 8th to 15th April (M. Cade, A. J. L. Smith); probably another, 26th May (M. Cade).

Fife Eden Estuary, 12th November to 21st January 1979 (I. G. Cumming).

Grampian Loch of Strathbeg, 4th March (A. R. Kitson).

Highland Loch Fleet, 23rd to at least 31st December (G. Beck, D. A. Grundy, J. P. Guest *et al.*).

Shetland Scatness, 29th March to 17th April (D. Coutts, J. D. Okill). Voe, Mainland, 13th to 15th May (M. S. Chapman, R. O'Reilly).

Suffolk Benacre, 3rd June (S. Pietrowski). Minsmere, 5th November (J. W. & Mrs J. E. Donovan, I. J. & Mrs K. Johnson).

1977 Cornwall Siblyback Reservoir, 26th November (S. Rogers).

1977 Dyfed Gann Estuary, 22nd to 27th April (T. A. W. Davis, J. W. Donovan, Mrs G. M. B. Sparks).

(North America) Also one at Bull Island, Co. Dublin, from 20th November to 19th April 1979. Almost double the previous best showing: the pattern of arrival dates, mostly February to May and November to December, is very similar to that for the huge influx of Ring-necked Ducks *Aythya collaris*.

Black Duck *Anas rubripes* (1, 6, 1)

North Yorkshire Fairburn Ings, 20th December (Miss P. S. Allen, S. C. Madge).

Scilly Tresco, ♀, first seen 27th October 1976 (*Brit. Birds* 70: 416; 71: 493), relocated 12th March and present to end of year, paired with Mallard *Anas platyrhynchos*, hatching seven young, four remaining to October and one to December (R. W. Allen, D. B. Hunt). For characters of hybrids see *Scilly Bird Report* (1978): 49-50.

(North America) Apart from one in Kent in 1967, the Yorkshire individual was the first record away from Ireland or Scilly.

Blue-winged Teal *Anas discors* (19, 41, 11)

Cambridgeshire Fenstanton, ♂, 11th to 12th February (J. S. Clark, G. & J. Manser); also seen in Norfolk.

Cornwall Marazion Marsh and offshore, ♀ or immature, 23rd October to 5th November (W. R. Hirst, P. A. Maker, B. K. Mellow *et al.*).

Kent Stodmarsh and Westbere, ♂, 4th May to 17th June (R. E. Collins, W. G. Harvey, J. P. McCarthy *et al.*).

Lincolnshire/Norfolk Wisbech Sewage-farm, two, 12th September (J. B. Kemp *et al.*), one to 24th (K. Atkin).

Norfolk Welney, ♂, 5th to 12th March, same as Cambridgeshire individual (per M. J. Seago). Cantley Reservoir and Hardley Floods, 6th August to 4th October (P. R. Allard, A. D. Boote *et al.*).

North Yorkshire/West Yorkshire Fairburn Ings, ♂, 12th September (M. Wells).

Western Isles South Uist, Loch Dunakillie, ♂, 16th June (M. J. Crosby, A. J. Merritt, Dr C. J. Spray *et al.*) and Loch an Eilein, 24th June (B. C. Forrester). Balranald, two, 6th to 21st October, three, 8th to 21st (C. H. Pickup, Dr C. J. Spray *et al.*).

1973 West Yorkshire Fairburn Ings, ♂, 17th March to August (*Brit. Birds* 71: 493): year, not stated, was 1973.

(North America) The total of 11 records is considerably more than in any previous year: perhaps this North American duck is following the trend of the Ring-necked Duck *Aythya collaris*.

Ring-necked Duck *Aythya collaris* (1, 49, 11)

Berkshire Theale, ♂, 24th December 1977 (see below) to at least 21st January (M. R. W. Sell *et al.*).

Cambridgeshire Little Paxton, ♂, 12th to 14th February (I. K. Dawson, D. J. Fisher, S. D. Housden *et al.*); possibly same, 21st November to at least 3rd December (R. W. H. Garner, C. A. E. Kirtland, T. Talbot); probably same, Grafham Water, 18th to 20th February (G. M. S. Easy, C. A. E. Kirtland, T. Talbot).

Devon Countess Wear, ♂, 28th to 29th November (F. R. Smith, D. C. Tucker *et al.*).

Dorset Radipole, ♂, 26th to 28th April (G. Armstrong, M. Cade).

Dyfed Bosherton, ♂, 29th November 1977 (see below) to at least 5th February (J. W. & J. E. Donovan). Llys-y-Fran Reservoir, ♂, 15th September (R. E. & Mrs A. Scott).

Gloucestershire/Wiltshire Cotswold Water Park, ♂, 8th to 30th April (E. & Mrs L. Fruin, J. G. Snowball, G. L. & M. G. Webber *et al.*), but see also Wiltshire; believed hybrid with Tufted Duck *Aythya fuligula*, April and again at least 3rd February 1979 (G. L. & M. G. Webber).

Greater London St James's Park, ♂, 23rd May (P. J. Oliver); not part of local collection.

Highland Loch Hope, ♂, 18th February (Dr D. M. & Mrs J. Edge).

Humberside Tophill Low Reservoir, ♂, 18th December 1977 (see below) to 22nd April; probably same, 22nd October to at least 29th November (M. Coverdale, A. Gibson, K. Rotherham *et al.*); probably same, Hornsea Mere, 29th January to 15th May (N. A. Bell, R. Hawley, K. Rotherham *et al.*).

Leicestershire Eye Brook Reservoir, ♂, 2nd January (P. H. Johnson, E. T. Lamb).

Norfolk Ranworth Broad, ♂, 9th March (D. Brown).

North Yorkshire Fairburn Ings, ♂, 18th December 1977 (see below) to 24th January (P. Ketchell, S. C. Madge).

Shetland Snarraborough Loch, Unst, ♂, 13th to 18th May (G. & R. Follows, J. D. Okill, I. Spence *et al.*). Fair Isle, immature ♂, 9th to 16th October, trapped 9th (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*).

Strathclyde Walton Dam, ♀ or immature, 5th November (J. Sweeney). Shewalton, ♂, 21st December, later to Gailes to at least 20th January 1979 (R. H. Hogg, I. H. Leach, D. A. Smith *et al.*).

Suffolk Alton Water, ♂ and ♀, 21st December 1977 (see below) to 15th January; additional ♀, 24th December 1977 (see below) to at least 12th February (P. W. Murphy, A. R. J. Paine, S. Pietrowski *et al.*). Barnham, ♂, 19th April (P. W. Murphy, A. R. J. Paine, S. Pietrowski *et al.*).

Warwickshire Draycote Water, ♂, 24th December 1977 (see below) to at least 29th January; same, Brandon, 5th March to 1st April (S. G. D. Cook, P. J. Finden *et al.*). Alvecote, ♂, 14th to 19th January (G. A. Arnold, R. J. Thomas *et al.*); same, Bodymoor Heath, 7th and 15th January (per G. R. Harrison).

Wiltshire Corsham, ♂, 11th to 26th February (R. L. Neal, J. C. & M. J. Rolls *et al.*), later in Gloucestershire/Wiltshire, same, Ashton Keynes, 16th April, apparently paired with Tufted Duck (G. L. & M. G. Webber).

1976 Avon Chew Valley Lake, immature ♂, first seen 26th December, not 19th December as previously stated (*Brit. Birds* 70: 417).

1977 Avon Chew Valley Lake, immature ♂, at least 26th December 1976 (see above) to mid February, same, Blagdon, 4th to 15th January (amplifies '♂, 8th January', *Brit. Birds* 71: 494); thus, Chew Valley Lake, only two adult ♂♂, 8th January to 16th February and three adult ♂♂, 6th to 12th February, not three and four respectively as previously stated (*Brit. Birds* 71: 494).

1977 Berkshire Theale, ♂, 24th December to at least 21st January 1978 (M. R. W. Sell *et al.*).

1977 Derbyshire Drakelow, ♂, 27th December (T. Cockburn, J. C. Eyre-Dickinson).

1977 Dyfed Bosherton, ♂, 29th November to at least 5th February 1978 (J. W. & J. E. Donovan).

1977 Humberside Tophill Low Reservoir, ♂, 18th December to 22nd April 1978 (M. Coverdale, A. Gibson, K. Rotherham *et al.*).

1977 Kent Sevenoaks, ♂, 27th November (the late Dr J. G. Harrison).

1977 Lothian Near Drem, ♀, 7th to least 23rd February and 23rd March (*Brit. Birds* 71: 494), first seen, 6th February (D. G. Andrew).

1977 North Yorkshire Fairburn Ings, ♂, 18th December to 24th January 1978 (P. Ketchell, S. C. Madge).

1977 Staffordshire Blithfield Reservoir, ♂, 20th to 22nd November (F. E. Fortey, S. M. Haynes, E. G. Phillips *et al.*).

1977 Suffolk Alton Water, ♂ and ♀, 21st December to 15th January 1978; additional ♀, 24th December to at least 12th February 1978 (P. W. Murphy, A. R. J. Paine, S. Pietrowski *et al.*).

1977 Warwickshire Draycote Water, ♂, 24th December to at least 29th January 1978 (S. G. D. Cooke, P. J. Finden *et al.*).

(North America) Also two drakes at the Gearagh, Co. Cork, on 24th December and a duck at Ballycotton, Co. Cork, on 10th December. Records of freshwater wildfowl vagrants are always prone to an unknown degree of duplication, but the huge influx of this transatlantic visitor during November to December 1977 (about 11 individuals) and January to March 1978 (also about 11 individuals) totally eclipsed the events of early 1977 and the previous grand total of 41 records. A further eight records came in

late 1978. It seems strange that none of the winter 1977-78 records came from the hitherto favourite area, the reservoirs of Avon.

King Eider *Somateria spectabilis* (62, 83, 5)

Dumfries & Galloway Loch Ryan, ♂, 27th November 1977 to at least 4th January (R. H. Hogg).

Highland Golspie and Loch Fleet, ♂, throughout year (A. R. Mainwood), probably that first seen 1975 (*Brit. Birds* 69: 331; 71: 495); immature ♂, 11th to at least 31st December (G. P. Catley, M. Mellor *et al.*).

Shetland Hascosay, ♂, 8th February (R. J. Tulloch). Tresta/Sandsound Voe, ♂, 28th February to 15th May (J. D. Hall, J. D. Okill, I. Sandison *et al.*).

Strathclyde Lochranza, Arran, ♂, 25th March to 14th May (N. G. Grist) and 14th to 18th June (M. Hutcheson), probably same, Glencallum Bay, Bute, 3rd April (Mrs K. Boydell, I. Hopkins), and Catacol Bay, 6th April (I. H. Leach). Troon, ♂, 12th April (I. H. Leach). Woodhall, ♂, 10th to at least 25th November (A. Brown, D. L. Clugston, S. Ward *et al.*), possibly returning individual of 9th November 1977 (*Brit. Birds* 71: 495) and relating to other Firth of Clyde records.

1969 Shetland Scalloway, ♂, 24th May to 25th June (*Brit. Birds* 63: 273), last seen 28th June (D. J. Holman).

1975 Highland Loch Fleet, ♂, 6th June to end of year (*Brit. Birds* 69: 331), first seen 5th June (R. A. Frost).

1976 Fife Torry Bay and Crombie Point, ♂, at least 3rd to 24th January (R. H. Hogg *et al.*), presumed returning ♂ of previous winter (*Brit. Birds* 71: 495).

1976 Shetland Burwick, ♂, 22nd January, probably same, Cliff Sound, 16th April (R. A. C. Johnstone). Linga Sound, immature ♂, 24th to 25th October (P. K. Kinnear, R. J. Tulloch). Toft, Mainland, adult ♂, 13th November (R. J. Tulloch), same, Sullom Voe, 17th November to 23rd March 1977 (P. K. Kinnear, M. G. Richardson, R. J. Tulloch *et al.*).

1977 Dumfries & Galloway Loch Ryan, ♂, 27th November to at least 4th January 1978 (R. H. Hogg), presumed returning ♂ of previous winter (*Brit. Birds* 71: 494).

1977 Shetland Sullom Voe, ♂, 13th January to 23rd March (*Brit. Birds* 71: 495), first seen, Toft, Mainland, 13th November 1976 (R. J. Tulloch).

(Circumpolar Arctic) Also a drake at Rossbeg, Co. Donegal, from 16th to 23rd April. A similar pattern to that of recent years. The prize for duck-spotting remains unclaimed.

Steller's Eider *Polysticta stelleri* (5, 8, 0)

Western Isles South Uist, the ♂ first seen in summer 1972 (*Brit. Birds* 66: 338) was present again in summer 1978.

(Arctic Russia to extreme northwest Canada) This individual has now been present, on and off, for seven years.

Surf Scoter *Melanitta perspicillata* (75, 65, 8)

Grampian Fraserburgh, ♀ or immature, 29th to 30th October (M. V. Bell, R. A. Schofield *et al.*). Spey Bay, adult ♂, 6th January (G. P. Mudge), probably remained to 1979 (P. Barry, N. Elkins *et al.*); two ♂♂, early May (R. H. Dennis, N. Elkins, P. D. Hyde *et al.*); two ♀♀, 2nd June (A. R. Dean, P. D. Hyde *et al.*); first summer ♂, 2nd June (A. R. Dean, P. D. Hyde *et al.*), 20th July (N. J. Redman *et al.*) and 10th August (R. H. Hogg); three ♂♂, 23rd September to 1979; four ♂♂, 24th November to 1979 (P. Barry, N. Elkins, R. H. Hogg *et al.*).

Highland Handa Island, ♂, 1st to 8th June (K. Fairclough, Mr Klinkert *et al.*).

(North America) Also a drake at Bundoran, Co. Donegal, from 2nd January to early May. Only two records away from the coast of northeast Scotland is against the trend of recent years, but the spate of long-staying individuals in that region over the past three years continues.

Black Kite *Milvus migrans* (5, 24, 1)

Dyfed Cymystwyth, 2nd June (P. Hurrell, I. C. Kightley, G. Todd).

1976 Norfolk Holkham, 12th and 17th October (T. M. Dakin, F. A. Wardman).

(Most of Eurasia, Africa and Australia) A typical date for this species. The late 1976 acceptance takes the total for that year to seven, four in spring and three in autumn.

American Kestrel *Falco sparverius* (0, 2, 0)

1976 Cornwall Bearah Tor, Bodmin Moor, ♀, 13th June (*Brit. Birds* 71: 496), last seen about 28th June, not 28th July as stated.

Red-footed Falcon *Falco vespertinus* (100, 184, 16)

Derbyshire Eastmoor, ♀, 7th June (K. Smith).

Devon Lundy, ♀, 30th May (M. Davies, M. Rogers, A. M. Taylor *et al.*).

Dorset Arne, ♂, 6th August (D. R. Bishop, M. D. Rowbottom, C. D. Unsworth).

Grampian Near Balmedie, first-year ♀, 20th to 21st July (M. A. S. Beaman, A. Cruickshank, J. Endicott *et al.*).

Hampshire New Forest, locality withheld, ♂, 13th May (D. N. Smith, J. H. Taverner) and 17th (Dr R. G. Mayall); same locality, ♀, 20th May (Dr R. G. Mayall, D. N. Smith); first summer ♀, possibly same, 11th June (T. M. Martin, J. H. Taverner). Sway, ♂, 24th to 25th June (M. C. & P. Combridge, E. J. Wiseman).

Humberside Flamborough Head, second-year ♂, 1st May (P. A. Lassey, Miss I. Smith, D. I. M. Wallace).

Kent Sandwich Bay, ♀, 1st June (D. C. Gilbert). Dungeness, ♂, 14th June (K. Redshaw).

Lincolnshire North Killingholme, ♂, 9th May (T. P. Milsom).

Man Calf of Man, ♂, 4th June (P. P. Jennings).

Norfolk Winterton, ♀, 25th July (R. Cobbold).

Shetland Out Skerries, ♂, 20th May (A. R. Lowe, W. E. Oddie). Yell, ♀, 9th to 28th May (A. Anderson, J. N. Dymond, R. J. Tulloch *et al.*). Gremista and Lerwick, ♀, 26th June to 3rd August (M. S. Chapman *et al.*).

1976 Hertfordshire Amwell, 9th September (*Brit. Birds* 70: 419), previously accepted, but now not considered acceptable after review.

1976 Norfolk Holkham ♂, 30th May (S. C. Joyner, N. Williams).

(East Europe and south from Siberia) A typical spring and summer scattering, concentrated as usual in southern counties, but with a record three reaching Shetland.

Eleonora's Falcon *Falco eleonora* (0, 1, 0)

1977 Merseyside Formby, probably first-summer, 8th to 9th August (Miss A. Copleston, K. W. Horton *et al.*).

(Mediterranean and northwest African coasts) This surprise occurrence is the first British record of this elegant falcon; it was thought to be a first-summer individual, and, of course, breeding adults would, at this time of the year, be busy feeding their nestlings on early trans-Mediterranean migrants.

Gyr Falcon *Falco rusticolus* (many, 47, 1)

Strathclyde Barassie, adult, 23rd December (W. R. Brackenridge, A. Brown, R. H. Hogg *et al.*).

1977 Grampian Williamston, Duffus, Moray, 24th November: this locality is in Grampian not Highland as stated (*Brit. Birds* 71: 497).

1977 Highland See Grampian.

(Circumpolar Arctic) The second successive year with just one record.

Baillon's Crane *Porzana pusilla* (many, 5, 0)

1976 South Glamorgan Llantwit Major, 7th to 8th February: this locality is in South Glamorgan not West Glamorgan as previously stated (*Brit. Birds* 71: 497).

1976 West Glamorgan See South Glamorgan.

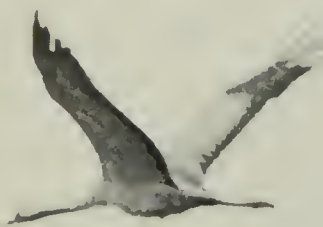
Crane *Grus grus* (many, 697, 30)

Cambridgeshire/Norfolk Ouse Washes, 8th August to 27th September (D. Allen, L. Street *et al.*).

Dorset Studland Heath, six, 2nd December (J. R. Cox, Mr Sanderson & Weymouth Grammar School YOC Group).

East Sussex Newhaven, 14th April (C. Winyard) and 24th April (D. A. Newman); a crane, probably same, near Lewes, 9th April (P. N. Ray).

Grampian Bogmoor, Spey Bay, 12th to 21st April (R. A. Shewan *et al.*). Ythan Estuary, Forvie and Collieston area, 26th April to at least February 1979 (D. J. Butler, C. D. Scott *et al.*) (plate 216).



216. Crane *Grus grus*, Grampian, April 1978
(R. H. Hogg)

Gwent Monmouth, 25th January (V. Card).

Hampshire Stubbington, adult and juvenile, 3rd December (D. I. Bill, T. A. Lawman).

Highland Loch Vaa, Speyside, 14th April (B. Goater, D. Halsey, J. Morris).

Humberside Near Messingham, about November to at least 11th February 1979 (M. Mellor *et al.*). Also seen in Lincolnshire.

Kent Tonbridge, 14th March (G. F. A. & Mrs S. M. Munns). Stodmarsh, 2nd to 5th April (J. A. Eyre, J. P. McCarthy, T. A. Wyatt *et al.*). Stodmarsh and Westbere, 20th to 21st May, and near Chilham, 23rd May (F. A. Clements, W. G. Harvey, C. R. Ireland *et al.*).

Lincolnshire Scotter and Sisworth area, occasionally, about November to February 1979 (M. Mellor *et al.*); same as Humberside individual¹

Man Scarlett, 22nd October (P. R. Marshall, Mrs M. Stewart).

Merseyside Marshside, 7th May (Miss A. Copleston, K. W. Horton).

Norfolk Holt, 6th March, and Glandford and Bayfield area, 25th to 26th March (J. B. Kemp, D. F. J. & A. Mitchell *et al.*), considered same.

Northumberland Budle Bay, 9th October (D. G. Bell).

North Yorkshire Mowthorpe, 5th May (M. Francis, F. A. Whitford).

Orkney Deerness, two, early May to mid September (D. Hunter *et al.*).

Shetland Unst, 28th September (J. I. Thompson).

1977 Norfolk Holme, 30th April to at least 2nd May (P. R. Clarke *et al.*).

1977 Suffolk Higham St Mary, 16th October, party of 26 flying south, presumed same as that seen in Essex and Kent (*Brit. Birds* 71: 497).

(North and central Eurasia, locally south to Turkey) Also one at Sraheens Bridge, Co. Mayo, on 18th January (present since November 1977), two on Dursey Island, Co. Cork, on 8th December, one at Ross-league, Cobh, Co. Cork, on 21st December and one at Blessington, Co. Wicklow, on 2nd December. Although half the year-total of 1977, which included an autumn flock of 26 (see above), there was again an unusually high number of spring records, and, as in 1976, a very late party was

observed on the English coast with complementary records in southern Ireland. An additional 1977 record is one at Broadmills, Co. Down, on 16th December.

Great Bustard *Otis tarda* (many, 6, 1)

Kent St Nicholas-at-Wade, third-year ♂, 7th January to 8th April (W. G. Harvey, C. H. Hindle *et al.*) (plates 217 and 218).

(Central and south Eurasia, discontinuously from Portugal to Pacific)
Only the seventh since 1936; the long stay of this bird was much appreciated by hundreds of observers.



217 & 218. Third-year male Great Bustard *Otis tarda*, Kent, February 1978 (Pamela Harrison)

Black-winged Stilt *Himantopus himantopus* (98, 58, 2)

Bedfordshire Houghton Regis, 7th July (L. Evans).

East Sussex Rye, 11th to 12th June (P. J. Grant *et al.*).

Kent Dungeness, 10th, 16th to 17th and 24th June and 6th July (P. J. Grant *et al.*): presumed same as East Sussex individual. See also West Sussex.

West Sussex Chichester Gravel-pits, 8th June (Miss N. Petrie-Hay, Miss J. V. Stacey *et al.*), presumed same, Sidlesham Ferry, 19th to 23rd June and 11th to 18th July (C. R. Janman, M. Shrubbs *et al.*) (*Brit. Birds* 71: plate 156). Although two return trips from the Selsey peninsula to Dungeness, totalling some 360 km, seemed unlikely, the Committee was obliged to conclude that the complementary dates at—and absences from—these well-watched localities indicated that only one individual was involved.

(Southern Eurasia, Africa, Australasia and the Americas) The first two records since 1974: the presumed commuting of one individual between West Sussex and the Kent/East Sussex border is fascinating.

Collared Pratincole *Glareola pratincola* (31, 25, 4)

Cheshire Near West Kirby, 21st May (A. Stoddart).

East Sussex Rye, 8th June (P. F. Bonham *et al.*).

Lancashire Banks Marsh, 14th to 15th October (W. J. Clift, D. J. Norton, P. Webb); same, Martin Mere, 17th October to 5th November (M. Burnside, W. D. Forshaw, B. Stanley *et al.*).

North Yorkshire/West Yorkshire Fairburn Ings, 31st May to 1st June (S. C. Madge, C. Winn *et al.*).

1977 Kent Pegwell Bay, 4th November (R. Garnier); same, Sandwich Bay, 16th November (A. C. B. Henderson, D. B. Rosair).

1977 Lancashire Marton Mere, 30th May to 1st June (*Brit. Birds* 71: 498). Previously accepted as *G. pratincola*, but, on further evidence, apparently showed characters of both this

species and *G. nordmanni* and may have been hybrid (J. P. Guest, H. Shorrocks, E. Stirling *et al.*). It was not seen on 26th May as previously stated.

(South Europe, southwest Asia and Africa) A fairly typical foursome.

Pratincole *Glareola pratincola* or *G. nordmanni* (36, 45, 4)

1977 Lancashire Marton Mere, 30th May to 1st June (J. P. Guest, H. Shorrocks, E. Stirling *et al.*): previously accepted as Collared Pratincole (*Brit. Birds* 71: 498). See under Collared Pratincole.

The totals include those specifically identified.

Semipalmated Plover *Charadrius semipalmatus* (0, 0, 1)

Scilly St Agnes, juvenile, 9th October to at least 9th November (P. A. Dukes, P. J. Grant, D. Sykes *et al.*).

(North America) The first British and Irish record of this Nearctic plover which is very similar to—and is considered by some taxonomists to be conspecific with—the Ringed Plover *C. hiaticula*.

Killdeer *Charadrius vociferus* (9, 15, 1)

Dyfed Pwll, Llanelli, 5th to 12th February (D. M. & M. C. Powell).

(North America) The fourth in the last five years for this rare transatlantic vagrant. Most of the 25 British and Irish records have been in February or March.

Greater Sand Plover *Charadrius leschenaultii* (0, 0, 1)

West Sussex Pagham Harbour, 9th December to 1st January 1979 (A. R. Kitson, B. A. E. Marr, R. F. Porter *et al.*).

(Southern Russia east to Mongolia) The first British record of this plover which winters on the shores of northeast Africa and the Red Sea; its long stay enabled hundreds of observers to see it.

Lesser Golden Plover *Pluvialis dominica* (6, 44, 6)

Cornwall Davidstow Airfield, adult *P. d. dominica*, 9th September to 13th October (M. Baradell, M. P. Frost, E. Griffiths *et al.*). Stithians Reservoir, adult, *P. d. dominica*, 5th October to 8th November (Dr G. W. Davies *et al.*) (plate 219); immature, 7th November (C. D. R. Heard).



219. Adult Lesser Golden Plover *Pluvialis dominica dominica*, Cornwall, November 1978 (S. J. M. Gantlett)

Scilly St Agnes, *P. d. dominica*, 25th to 27th October (M. Davies, A. R. Dean *et al.*).

1975 Dumfries & Galloway Caerlaverock, 23rd November to end of year (*Brit. Birds* 70: 447), last seen 2nd January 1976 (per R. H. Dennis).

1976 Dumfries & Galloway Caerlaverock, 2nd January (per R. H. Dennis), first seen 23rd November 1975 (*Brit. Birds* 70: 447).

(Arctic North America and northeast Asia) Also singles at Termoncarragh Lake, Co. Mayo, on 24th September and Tacumshin Lake, Co. Wexford, from 25th to 27th September. These six equal the previous best autumn showing in 1975.

Sociable Plover *Chettusia gregaria* (5, 14, 3)

Cornwall Hayle, immature, 11th to 16th October (S. M. Christophers, D. L. Clugston, Dr G. W. Davis *et al.*).

East Sussex Arlington Reservoir, probable adult, 9th to 10th October (J. Willsher *et al.*).

Nottinghamshire Ranskill, 30th May (A. & Mrs H. E. Dobbs, J. A. Hopper).

1968 Kent Westwell, 12th April (A. S. Douthwaite).

1976 Cambridgeshire Fen Ditton, immature, 17th October to 2nd November (*Brit. Birds* 70: 420), again, 6th (T. A. Walsh).

1977 Norfolk Welney, 3rd September to at least 20th (*Brit. Birds* 71: 499), last seen 25th (R. A. Frost *et al.*).

(Southeast Russia and west-central Asia) There were only 12 records before 1970 (including the late 1968 acceptance, above), but in the last eight years there have been ten, including, now, only the second ever in spring.

Semipalmated Sandpiper *Calidris pusilla* (2, 16, 1)

Humberside Faxfleet, juvenile, 6th October (D. I. M. Wallace).

(North America) Following our exhaustive deliberations leading to the recent review of British records of this difficult peep (*Brit. Birds* 72: 264-274), this individual constitutes only the sixth British record. The 13 Irish records are currently under review by the Irish Records Panel.

Least Sandpiper *Calidris minutilla* (6, 16, 1)

(North America) None in Britain, but one at Lady's Island Lake, Co. Wexford, on 17th September.

White-rumped Sandpiper *Calidris fuscicollis* (24, 122, 17)

Avon Chew Valley Lake, two immatures, 27th to 28th October, one to 2nd November (A. H. Davis, K. E. Vinicombe *et al.*).

Cheshire Frodsham, adult, 10th August (G. G. Williams).

Cornwall Hayle, adult, at least 16th to 17th September (R. Smaldon *et al.*).

Kent Sandwich Bay, adult, 1st August (D. C. Gilbert, I. Hodgson, J. P. McCarthy).

Norfolk Breydon Water, adult, 30th July to 4th August (P. R. Allard *et al.*).

Scilly St Mary's, adult, 18th June (R. W. Allen, D. B. Hunt). Bryher, St Mary's, St Agnes and Tresco, immature, 22nd October, St Mary's, 23rd, and Tresco, 23rd to 26th (D. J. Britton, A. R. Lowe *et al.*).

Suffolk Easton Broad, adult, 22nd October (C. R. Naunton). Benacre, immature, 23rd October to 5th November (B. J. Brown, G. J. Jobson, R. Waters *et al.*).

1972 Suffolk Minsmere, 5th to 10th August (D. J. Holman, G. J. Jobson).

1973 Norfolk Cley, 11th August (*Brit. Birds* 67: 323), last seen 15th (per M. J. Seago).

1977 Cleveland Teesmouth, 10th September (R. Little).

1977 Kent Grain, 4th September (T. E. Bowley).

(North America) Also seven in Ireland: at Lady's Island Lake, Co. Wexford, on 30th September, on Dursey Island, Co. Cork, on 14th September, at Duncrue Street Marsh, Belfast, Co. Antrim, on 19th September and another there on 1st October, at Lissagriffin, Co. Cork, on 16th

September, at Ballycotton, Co. Cork, from 17th to 18th September and at Clonakilty, Co. Cork, on 19th September. The most ever; and the St Mary's adult is the first June occurrence.

Baird's Sandpiper *Calidris bairdii* (5, 63, 1)

East Sussex Rye, 23rd July (B. A. E. Marr, R. F. Porter *et al.*).

(North America) The least showing since 1969 and only the second July occurrence.

Broad-billed Sandpiper *Limicola falcinellus* (23, 34, 3)

Norfolk Breydon Water, 5th to 8th May (P. R. Allard, A. D. Boote, B. J. Brown). Wolferton, trapped, 16th September (Miss J. Gostling, P. L. Ireland, P. Irving *et al.*) (plate 220).



220. Broad-billed Sandpiper
Limicola falcinellus, Norfolk,
September 1978 (Philip L.
Ireland)

Suffolk Minsmere, 18th to 22nd May (Miss H. J. Beck, A. F. Diebel, G. R. Welch *et al.*).

1976 Merseyside Crossens Marsh, 1st July (*Brit. Birds* 71: 501), last seen 4th July (A. H. J. Harrop).

(North Eurasia) East Anglia in May remains by far the best bet for finding one of these sandpipers.

Buff-breasted Sandpiper *Tryngites subruficollis* (33, 286, 15)

Avon Chew Valley Lake, 14th to 15th October, when killed by Carrion Crow *Corvus corone* (A. H. Davis).

Cheshire Frodsham, 1st October (R. Halsey, S. Hind, B. E. Murray).

Cornwall Davidstow Airfield, 12th to 16th September (P. M. Ellis), same, Crowdy Reservoir, 17th (S. M. Christophers). St Just Airfield, 4th to 5th November (W. R. Hirst, L. P. Williams).

Gwent St Bride's Wentlloog, 13th to 15th September (S. N. G. Howell, Dr W. A. Venables).

Nottinghamshire Gunthorpe, 24th to 28th September (Dr D. J. Parkin, M. C. Powell, P. H. Saunders *et al.*).

Scilly St Mary's, juveniles: 12th to 17th September, two, 13th to 17th (A. R. Lowe, D. G. H. Mills, N. A. Preston *et al.*).

Shetland Walls, 28th May (J. D. Okill *et al.*).

Somerset Steart, 28th July (B. Rabbitts).

South Glamorgan Rhymney Great Wharf, 11th to 19th September (S. N. G. Howell, P. G. Lansdown *et al.*).

Staffordshire Chasewater, 14th September (G. Evans, S. K. Welch, S. M. Whitehouse).

1977 Dyfed Ramsey Island, 30th to 31st August (Ms K. Francis *et al.*). Gwendraeth Estuary, 11th to 12th September (D. M. Powell, E. J. Smith).

(North America) Also singles on Dursey Island, Co. Cork, on 5th August, at Lissagriffin, Co. Cork, on 6th October and at Rahasane, Co. Galway, on 6th October. Before 1975, there had been 137 records in Britain and Ireland, but the annual totals in the last four years read 67, 15, 67 and 15. The Shetland bird constitutes only the ninth spring record. An additional 1977 record is one on the Bann estuary, Co. Derry, on 9th October.

Great Snipe *Gallinago media* (180, 43, 2)

Kent Westbere, 9th April (W. G. Harvey).

Lincolnshire Saltfleetby, first-year, 8th to 15th October, trapped 13th (P. Childs, S. Lorand, J. Walker *et al.*) (plate 221).

(Northeast Europe and northwest Asia) This species gets no commoner, despite the ever-increasing number of observers.



221. First-year Great Snipe *Gallinago media*, Lincolnshire, October 1978 (Keith Atkin)

Long-billed Dowitcher *Limnodromus scolopaceus* (9, 39, 5)

Cornwall Hayle, 19th March to 24th April, then Marazion Marsh, 25th to 27th (R. Butts, S. M. Christophers *et al.*).

Devon Near Bideford, 2nd to 5th April (W. H. Tucker).

Dorset Fleet, first seen 10th December 1977 (*Brit. Birds* 71: 502), remained to 23rd February (G. J. Armstrong).

Gwynedd Llyn Alaw, Anglesey, 12th to 14th September (F. A. Clements, G. Patterson, J. P. Wilkinson).

Scilly St Mary's, first seen 28th September 1977 (*Brit. Birds* 71: 503), remained to at least 19th February (R. W. Allen, D. B. Hunt). St Mary's, juvenile, 3rd to 18th October, then St Agnes, 19th to at least 29th (R. E. Scott *et al.*).

Somerset Steart, 13th January (J. Breeds, B. Rabbitts).

1975 Scilly St Mary's, 5th to 12th October (*Brit. Birds* 69: 335), last seen 13th October (per H. P. K. Robinson).

1977 Scilly St Mary's, 28th September to early 1978 (*Brit. Birds* 71: 503), remained until at least 19th February 1978 (R. W. Allen, D. B. Hunt).

(North America and northeast Siberia) The Somerset, Cornwall and Devon records, and the Dyfed unspecified one (see below), were all on unusual dates, the majority of records being in autumn into winter; but, with so many individuals staying for long periods, possible onward movements to new localities could easily be causing undetected duplication.

Dowitcher *Limnodromus scolopaceus* or *L. griseus* (31, 119, 11)

Dyfed Gwendraeth Estuary, 30th July (G. G. Evans, E. J. Smith).

Scilly St Mary's, 13th September (J. M. Turton *et al.*). Tresco, 15th September (D. G. H. Mills).

(North America) Also singles at Akeragh Lough, Co. Kerry, from 17th to 29th October, with another there on 1st December, on Cape Clear Island, Co. Cork, from 27th to 28th September and on Lough Beg, Co. Derry, from 9th September to 15th October. The two records in Scilly are regarded as referring to one individual. An additional record for 1977 is one on the Bann estuary, Co. Derry, on 9th October.

Greater Yellowlegs *Tringa melanoleuca* (12, 9, 2)

Western Isles Peninereine, South Uist, 14th August (Dr C. J. Spray, D. Walker).

(North America) Also one at Ballycotton, Co. Cork, from 29th April to 6th May. The first ones since 1975, but two further claims remain unresolved. Spring records are particularly exceptional.

Lesser Yellowlegs *Tringa flavipes* (35, 100, 4)

Grampian Ythan Estuary, 7th October (R. Miller).

Humberside Cleethorpes, 24th September (S. J., W. J. & W. R. Meek). Flamborough Head, 16th to 17th December (P. A. Lassey, Miss I. Smith, D. I. M. Wallace).

(North America) Also one at South Slob, Co. Wexford, on 17th December. Fewer than in most recent years.

Terek Sandpiper *Xenus cinereus* (3, 12, 2)

Essex Old Hall Marshes, 29th May (C. J. Mackenzie-Grieve).

Norfolk Breydon Water, 5th July (P. R. Allard).

(Northeast Europe and Siberia) Two more in the surge of records in the 1970s. There were only six British records before 1970, but there have been 11 since.

Spotted Sandpiper *Actitis macularia* (6, 34, 7)

Essex Hanningfield Reservoir, adult, 3rd to 17th September (Dr S. Cox, S. Hudgell, J. Miller).

Scilly St Agnes, juvenile, 15th to at least 25th August (D. B. Hunt *et al.*). St Mary's, juvenile, 8th to 30th September (A. R. Lowe, D. G. H. Mills, N. A. Preston *et al.*). Tresco, two juveniles, 20th to 23rd August (W. E. Oddie); juvenile, 17th to 18th September (T. Baker, C. J. McCarty, N. A. Preston *et al.*); juvenile, 7th to 14th October (C. N. Hacking, C. G. Stack, R. I. Thorpe *et al.*).

1977-East Sussex Barcombe Mills Reservoir, juvenile, 3rd to 11th November (*Brit. Birds* 71: 504), last seen 12th November (R. J. Fairbank).

1977 Strathclyde Endrick Mouth, 8th to 9th August (D. C. Jardine).

1977 Suffolk Walberswick, 12th June (S. W. & Mrs P. R. Shott, P. J. White).

(North America) The two late acceptances for 1977 take the total for that

year to seven, equalled by the events of 1978. Scilly in autumn has always been a good bet for this close relative of the Common Sandpiper *A. hypoleucos*, forcibly exemplified by this series of six individuals.

Wilson's Phalarope *Phalaropus tricolor* (1, 91, 5)

Somerset Steart, 22nd to 30th August (J. Breeds, F. R. Browne, B. Rabbits).

Strathclyde Knockshinnoch Lagoons, juvenile, 6th to 7th September (M. Rollie, R. Wemyss *et al.*).

West Yorkshire White Holme Reservoir, 13th to 14th June (D. I. & Mrs R. Crawshaw, D. J. Sutcliffe). Near Ossett, 26th to 27th September (A. Frudd, D. Ladley, D. Senior).

1976 Strathclyde Shewalton, 23rd September (G. J. Cambridge, C. H. Macphee).

1976 Suffolk Kessingland, 2nd to 3rd June (R. Straton).

(North America) Also one on Bull Island, Co. Dublin, from 13th to 14th September. Near the average for recent years. An additional 1977 record is of one at Lough Beg, Co. Derry, from 10th to 11th September.

Long-tailed Skua *Stercorarius longicaudus* (not known, not known, 66)

Berkshire/Surrey Wraysbury Reservoir, juvenile, 30th August (C. D. R. Heard).

Cleveland Coatham, adult, 9th August (A. J. Wheeldon). Hartlepool, adult, 12th August; 19th (M. A. Blick, J. B. Dunnett). Seaton Snook, juvenile, 23rd August (R. Little).

Cornwall St Ives, juveniles: 30th September (D. J. Barker, P. A. Maker *et al.*); 1st October (R. B. Hastings, A. V. Moon).

Devon Torquay, adult, 15th July (T. F. Edwards).

Dumfries & Galloway Near Cairnsphairn, juvenile, found dying, 27th September (A. D. Watson, J. Wykes).

Essex Colne Point, juvenile, found dying, 8th September (Mrs O. Buck, Dr S. Cox).

Grampian Kinnaird Head, adult, 25th August (D. I. M. Wallace). Girdleness, juvenile, 8th October (Dr A. G. Knox).

Gwynedd Little Orme's Head, adult, 1st October (N. Pierce).

Highland Sound of Raasay, adult, 25th August (S. Rogers).

Humberside Flamborough Head, adult, 1st May (P. A. Lassey); juveniles: 18th August (P. A. Lassey, Miss I. Smith); 25th (P. A. Lassey, S. Rooke, Miss I. Smith); sub-adult, 26th (P. A. Lassey, S. Rooke, Miss I. Smith *et al.*); immature, 27th (P. A. Lassey, Miss I. Smith); at least one adult and two juveniles, 28th (P. A. Lassey, Miss I. Smith, D. I. M. Wallace *et al.*); three adults, 30th (D. I. M. Wallace); juvenile, 2nd September (P. A. Lassey); adult, immature and juvenile, 12th (P. A. Lassey, D. I. M. Wallace); adults: 16th (P. A. Lassey, V. A. Lister, S. Rooke); 18th (P. A. Lassey); juveniles: 23rd (J. E. Dale, A. Grieve, D. E. Murray *et al.*); two, 27th (D. I. M. Wallace); sub-adult and two juveniles, 1st October (P. A. Lassey, Miss I. Smith, D. I. M. Wallace). Spurn, second/third year, 16th July (J. Cudworth, Mr & Mrs C. Massingham *et al.*). Hornsea, juveniles: 30th August; 1st October (W. F. Curtis). North Killingholme, juvenile, 18th September (G. P. Catley).

Kent Off Dover, adult, 2nd September (D. C. Gilbert, W. G. Harvey). Foreness, adult, 17th September (D. C. Gilbert). Allhallows, two juveniles, 1st October (T. E. Bowley, M. Coath, L. F. & S. L. Woolard). Dungeness, first-winter, 29th to 30th November, trapped 29th (N. R. Davies, K. Redshaw, N. Riddiford *et al.*).

Lancashire Hest Bank, juvenile, 1st October (P. Guy).

Lincolnshire Donna Nook, juvenile, 1st October (S. Lorand).

Merseyside Moreton, immature, 30th September (Miss J. E. Moore, D. Woodward). New Brighton, juvenile, 11th September (J. K. Bannon). New Brighton/Great Moels, two juveniles, 30th September (S. M. Whitehouse *et al.*). Leasowe, sub-adult and at least two juveniles, 30th September (K. Atkin, D. J. Holman *et al.*) (plate 222); juvenile, long dead, 1st October (P. R. Kennerley, D. J. Pitman, W. M. Underwood *et al.*). Red Rocks, Hoylake, juvenile, 1st October (J. R. Dagley, S. Stirrup, A. M. Stoddart *et al.*). Wallasey, juvenile, 1st October (E. J. Abraham, G. P. Catley, J. F. A. First *et al.*).

Norfolk All juveniles: Holme, 30th August (P. R. Clarke); Cley, 16th September (G. Smith); Sheringham, two, 17th (C. I. Bushell, D. S. Farrow).



222. Sub-adult Long-tailed Skua *Stercorarius longicaudus*, Merseyside, September 1978
(Keith Atkin)

North Yorkshire Filey Brigg, adults: 6th August (I. Forsyth, D. E. Murray, M. Nethercoat); 13th; 20th (A. Botterill, T. I. Corbett, H. J. Whitehead *et al.*); 15th September (P. J. Dunn, Mr & Mrs Stevens). Scarborough, adult, 30th August (R. H. Appleby).

Shetland Sumburgh, juvenile, 19th August (M. S. Chapman, R. O'Reilly). Fetlar, adult, 17th September (J. N. Dymond).

Western Isles Little Minch, adult, 30th June (M. A. Blick, T. Francis, A. J. Wheeldon).

1976 Grampian Fraserburgh, long dead, 26th September (P. M. Ellis).

1976 South Yorkshire Wath Ings, adult, 29th May: this locality is in South Yorkshire not West Yorkshire as previously stated (*Brit. Birds* 71: 505).

1976 West Yorkshire see South Yorkshire.

1977 Norfolk Holme, adult, 19th July (P. R. Clarke). Snettisham, adult, 17th September (G. M. S. Easy, T. Talbot). Cley, juvenile, 17th September (D. J. Holman, J. Ward *et al.*).

(North Europe and west Siberia) For the third consecutive year the Committee has had its work cut out dealing with this species: after about 170 records in the ten years 1958-67, there have now been 259 in the last three years.

Mediterranean Gull *Larus melanocephalus* (not known)

1958 North Yorkshire Off Scarborough, 12th October, previously not accepted (*Brit. Birds* 53: 430), now accepted after review (K. Hardcastle, J. R. Mather, R. C. Parkinson *et al.*).

(Coasts of southwest Europe, the Mediterranean, northwest Africa and Black Sea, small numbers in Baltic) Formerly much rarer, this species was on the list of species considered by the Committee until 1962 (*Brit. Birds* 56: 394).

Laughing Gull *Larus atricilla* (2, 13, 4)

Cornwall Newlyn Bay, first-winter, January to 23rd March (S. M. Christophers *et al.*); same as first seen St Ives Bay, 10th to 25th December 1977 (*Brit. Birds* 71: 506, plate 188).

Dumfries & Galloway Loch Ken, probable second-winter, 22nd September to at least December (I. R. & Mrs D. Willis *et al.*) (plate 15).

Dyfed Nant-y-Moch Reservoir, adult, 19th May, same, Llyn Syfydrin Reservoir, 20th (M. P. & Mrs R. A. Frost).

Merseyside Hilbre, first-summer, 16th May (T. R. Cleeves, J. B. O. Rossetti).

North Yorkshire/West Yorkshire Fairburn Ings, adult, 23rd September to 7th October (P. Kirk, C. Wiinn *et al.*).

1968 Strathclyde Loch Lomond, adult, 2nd April (J. Mitchell).

1977 Cornwall St Ives Bay, 10th to 25th December (*Brit. Birds* 71: 506), again, Newlyn Bay, January to 23rd March 1978 (S. M. Christophers *et al.*).

(North America and Caribbean) Although there are still only 19 records of this Nearctic gull, a pattern of spring and autumn occurrences is starting to show; June, however, is the only month not yet represented.

Franklin's Gull *Larus pipixcan* (0, 5, 0)

Suffolk Individual first seen Lowestoft Harbour, 13th November 1977 (*Brit. Birds* 71: 506, plates 186 & 187; 72; plates 213 & 214), last seen near Oulton Broad, 27th March (G. W. Maybury).

1977 Suffolk See above.

Ring-billed Gull *Larus delawarensis* (0, 14, 8)

Cleveland Coatham Marsh, first-winter, 19th December (D. J. Britton).

Devon Plym Estuary, adult, 15th January (P. James). Torcross, first-winter, 11th March (P. M. Ellis).

West Glamorgan Blackpill, adult, winter plumage, 5th to 7th April (R. J. Howells, J. E. Morgan); adult, summer plumage, 7th to 8th and 23rd April, 3rd and 7th May (R. J. Howells, J. E. Morgan, M. C. Swan *et al.*); second-summer, 23rd April to 7th May (R. J. Howells, A. M. W. Reynolds, I. Tew *et al.*); another second-summer, 24th April to 18th May (R. J. Howells, J. E. Morgan, A. M. W. Reynolds); another second-summer, 24th April to 4th May (R. J. Howells, J. E. Morgan).

1977 Hampshire Langstone Harbour, 1st June to 31st July (*Brit. Birds* 71: 507), last seen 1st August (R. E. Scott).

1977 South Glamorgan See West Glamorgan.

1977 West Glamorgan Blackpill, adult, 12th to 13th March: this locality is in West Glamorgan not South Glamorgan as previously stated (*Brit. Birds* 71: 507).

(North America) Eight records represent a new peak; the huge gull roost at Blackpill remains the hot spot for perceptive gull-enthusiasts.

Ross's Gull *Rhodostethia rosea* (2, 20, 0)

1977 Shetland Lerwick Harbour, adult, 20th to 23rd November (*Brit. Birds* 71: 507), last seen 25th November (per J. D. Okill).

Ivory Gull *Pagophila eburnea* (76, 15, 2)

Norfolk Brancaster, first-winter, 5th to 9th January (R. Kimber *et al.*).

(High Arctic) Also one at Bangor, Co. Down, from 26th November to 1st December (plate 41). Typical dates for this scavenger of the arctic ice-floes.

Gull-billed Tern *Gelochelidon nilotica* (53, 134, 6)

Gwynedd Point Lynas, Anglesey, 16th July (A. H. J. Harrop, N. Hughes, M. Thomas *et al.*).

Hampshire Warsash, 29th April (D. A. Christie).

Humberside Hornsea, 19th July (A. M. Allport).

Kent Sandwich Bay, 18th May (D. C. Gilbert).

Lincolnshire Trusthorpe Point, adult, 3rd September (J. R. Walker).

Tyne & Wear Whitburn, 6th July (P. Bell).

(Almost cosmopolitan, nearest breeding colony in Denmark) An average showing on typical dates.

Caspian Tern *Sterna caspia* (30, 101, 2)

Kent Lade, Dungeness, 3rd June (N. R. Davies).

Shetland Fair Isle, 29th May (P. J. Ewins).

1977 Derbyshire Ogston Reservoir, 19th June (M. Benten).

(Cosmopolitan except South America, but everywhere local) The least showing since 1970; observers have to find their own as they are nearly always 'gone tomorrow'.

Bridled Tern *Sterna anaethetus* (3, 2, 0)

1977 Devon Lundy, wing found, 22nd April (A. Cleave, P. Roberts, P. R. Sterry), now retained by A. Cleave.

(Oceanic islands from Caribbean east to Philippines and Australia) All four previous records have been of dead birds, two of them in the Bristol Channel area, Somerset in October 1958 and Glamorgan in September 1954, while the others were at Dublin in November 1953 and in Kent in November 1931. The wing found on the slopes of Lundy was fairly fresh.

Whiskered Tern *Chlidonias hybridus* (20, 47, 2)

Hampshire Warsash, 20th May (D. A. Christie).

Wight Near Seaview, adult, 10th September (D. J. Brazier).

(South Eurasia, northwest, east and south Africa, and Australia) After ten records in the previous two years, these two are a return to the form of the early 1970s.

White-winged Black Tern *Chlidonias leucopterus* (50, 326, 10)

Avon Chew Valley Lake, juvenile, 9th to 17th September (A. H. Davis, G. J. Upton, K. E. Vinicombe *et al.*).

Essex Abberton Reservoir, adult, 5th to 9th August (G. B. Brown, D. R. Moore, M. Wright *et al.*). Bradwell-on-Sea, adult, 8th September (G. Smith), the same, Foulness, 9th (R. Glover).

Humberside Tophill Low Reservoir, adult, 7th to 10th August (P. Bishop, B. S. Bryan, P. Izzard *et al.*).

Kent Dungeness, juveniles: 22nd to 23rd August (T. G. Ball, S. W. Gale, A. M. Heaven *et al.*); another, 28th to 3rd September (N. Riddiford *et al.*); another, 16th September (A. J. Greenland, R. E. Turley).

Staffordshire Blithfield Reservoir, juvenile, 7th September (L. G. Catlin, K. Verrall).

Surrey Queen Mary Reservoir, adult and juvenile, 19th August (M. J. Rogers *et al.*).

1977 Humberside Hornsea Mere, juvenile, 23rd August (A. M. Allport).

1977 Lancashire Martin Mere, 27th May (D. Crompton, M. Moser, C. G. Tomlinson).

1977 Norfolk Welney, two, 23rd to 25th May (G. H. Scott *et al.*).

1977 West Sussex Pagham Harbour, adult, 30th July (D. J. Smith).

(Southeast Europe, west and east Asia) The least showing since 1965 and the first blank spring since 1974.

Brünnich's Guillemot *Uria lomvia* (3, 6, 1)

Grampian St Cyrus, newly dead, 14th July (N. K. Atkinson, C. A. Johnson), now in Montrose Museum.

1977 Northumberland Farne Islands, 13th July (N. Leeming, R. Pimm, J. B. Ribbands).

(Arctic coasts of Canada and Russia) These two records rather refute the suggestion in the previous report that a tiny wintering population is responsible for the tideline records of this arctic auk. The observers of a healthy, live individual in Northumberland will be widely envied.

Rufous Turtle Dove *Streptopelia orientalis* (2, 5, 1)

Cornwall Consols, near St Ives, 18th to 19th May (P. Pearce, V. Stratton).

(Urals, east to Japan) This record, the eighth ever, echoes that in Scilly in May 1960 (*Brit. Birds* 53: 445-446). There are five late autumn records and one for January.

Great Spotted Cuckoo *Clamator glandarius* (6, 13, 2)**Cornwall** Porthgarra, 28th April to 1st May (M. G. Barradell *et al.*).**Merseyside** Red Rocks, Hoylake, immature, 23rd September (Miss J. E. Moore, D. T. Patrick, D. Woodward).

(South Europe, southwest Asia and Africa) Only the second year that has seen more than one record of this southern vagrant. In addition, a late Irish record reaches us, of one on Mahee Island, Strangford Lough, Co. Down, from 9th to 16th September 1975.

Yellow-billed Cuckoo *Coccyzus americanus* (22, 11, 2)**Humberside** Spurn, trapped, 27th October (S. E. Cannell, G. Hainsworth, P. Higson *et al.*).**Lincolnshire** Welton-le-Marsh, found dead, 30th October (R. Lambert, R. Pritchard), now in Lincoln Museum.

(North America) Nine of the 13 records since 1958 have been of dead or dying individuals. The dates of these two are typical.

Snowy Owl *Nyctea scandiaca* (many, 162, 9)

Shetland Fetlar, two adult ♀♀, present since late 1977 (*Brit. Birds* 71: 510) to end of May, third adult ♀ throughout April; then none until adult ♀ from 23rd June, joined by second adult ♀ 24th July to end September and probably to end of year (J. N. Dymond). Unst, ♀, 28th April to 14th May (W. Henderson, M. Sinclair, I. Spence). Whalsay, ♀, 7th May (Dr B. Marshall, J. D. Okill). Aywick, Yell, ♀, 15th May (J. Nicolson), same, Westsands, 20th May, and north of Harkland, 21st June (J. H. Ballantyne). North Mainland, at least one ♀, 14th May to mid August (D. Coutts, E. Tait *et al.*). Eshaness, Mainland, ♀, 20th August (R. Robertson). Uyeasound, Unst, ♀, 10th to 11th September (I. Spence); ♀, 1st to 24th November (I. Spence, E. Thomson). Bressay, ♀, 8th October (D. Herning).

1977 Shetland Burra, ♀, 23rd October (*Brit. Birds* 71: 510); this entry should be deleted (per J. D. Okill). Fetlar, two adult ♀♀, 8th September to end of year (*Brit. Birds* 71: 510), present to end of May 1978, see above.

(Circumpolar Arctic) As in the previous two years, no males but plenty of patient females.

Common Nighthawk *Chordeiles minor* (3, 4, 1)**Orkney** Near Kirkwall, trapped, 12th September (J. R. L. Hogarth, A. D. K. Ramsey, E. J. Williams).

(North America) The earliest ever of the eight records, and only the second away from Scilly, the other having been in Nottinghamshire in October 1971.

Alpine Swift *Apus melba* (150, 129, 9)**Cornwall** Gunwalloe, 24th April (M. J. Strickland).**East Sussex** Rye, 8th June (P. F. Bonham).**Humberside** Flamborough Head, 1st July (P. A. Lassey).**Kent** Sandwich Bay and area, 13th to 17th August (R. Garnier, D. C. Gilbert, W. G. Harvey *et al.*).**Man** Maughold Head, 9th June, two, 11th June (R. Cripps, Dr J. P. Cullen, A. Martin *et al.*).**Suffolk** Dingle Marshes, 1st June (S. P. Rigden), same, Westleton Heath, shortly afterwards (A. J. Morris).

(South Eurasia, northwest and east Africa) Also singles at Raheny, Co. Dublin, on 30th March and on Cape Clear Island, Co. Cork, on 2nd June. Apart from the exceptionally early one in Ireland, this is a typical showing for this ace flyer.

Belted Kingfisher *Ceryle alcyon* (0, 0, 1)

(North America) One said to have been shot in Cornwall in November 1908 is currently under consideration by the BOU Records Committee, but the first acceptable record for Britain and Ireland was one discovered at Bunree River, Co. Mayo, on 10th December; alas, it was shot on 3rd February 1979.

Bee-eater *Merops apiaster* (154, 94, 2)

Dyfed Near Aberporth, 26th May (J. & Mrs R. Bowen).

Kent Dungeness, 21st May (G. Jones, A. J. Livett).

(South Europe, southwest Asia and northwest Africa) Two typical over-shooting spring migrants.

Roller *Coracias garrulus* (135, 58, 1)

Surrey/West Sussex Near Gatwick Airport, 29th May (the late Dr J. G. Harrison).

1977 Shetland Mid Yell and area, 17th to 22nd July (R. J. Tulloch *et al.*).

(South and east Europe, west Asia and northwest Africa) The least showing since 1971.

Calandra Lark *Melanocorypha calandra* (0, 1, 1)

Shetland Fair Isle, 28th April (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*).

(Iberia and Morocco east to southern Russia) The one previous record was at Portland, Dorset, on 2nd April 1961 (*Brit. Birds* 55: 44-46).

Short-toed Lark *Calandrella brachydactyla* (40, 152, 7)

Norfolk Weybourne, immature, 14th to 15th October (G. E. Dunmore, S. C. Joyner, K. B. Shepherd *et al.*); adult, 15th to 20th October (K. Bailey, M. Fiszer, K. B. Shepherd).

Scilly Gugh, 25th to 27th April (J. W. Hale, D. B. Hunt, J. D. Sanders).

Shetland Fair Isle, 29th April (P. J. Ewins, I. S. Robertson, R. A. Williams); 10th to 13th May (G. W. & R. Follows, I. S. Robertson *et al.*); 23rd September (A. Graham).

1977 Shetland Out Skerries, 27th to 28th September (*Brit. Birds* 71: 511), delete 'J. D. Okill'.

(South Eurasia, north and east Africa) Also one on Great Saltee, Co. Wexford, from 9th to 11th October. Seven records is well below the average of the last ten years, and the spate of autumn occurrences in Scilly in recent years comes to an abrupt halt.

Red-rumped Swallow *Hirundo daurica* (7, 53, 1)

Salop Shrewsbury, 30th April to 1st May (M. Isherwood, C. Wright *et al.*).

1977 Dyfed Dale, 5th March (R. W. Brock).

(South and east Eurasia, and Africa) Since 1966 there has been only one other year (1974) with just one record. The late acceptance for 1977 is—by one day—the earliest British record.

Richard's Pipit *Anthus novaeseelandiae* (135, 825, 25)

Cornwall Lelant, 7th October (E. Griffiths, L. P. Williams).

Humberside Spurn, 11th October (J. Cudworth, J. S. George).

Kent Sandwich Bay, 6th May (D. C. Gilbert, J. P. McCarthy, D. B. Rosair). Foreness Point, 11th to 17th December (D. C. Gilbert, W. G. Harvey, Dr B. J. Summerfield *et al.*).

Lincolnshire Saltfleetby, 1st October (M. Mellor). Donna Nook, two, 10th October (K. Atkin, S. Lorand, K. Morrison).

Norfolk Winterton, 27th October (P. R. Allard)

North Yorkshire Scarborough, 14th October (R. H. Appleby).

Scilly St Mary's, 14th to 30th October (per H. P. K. Robinson).

Shetland Fair Isle, minimum of 13: two, 29th September; five, 30th, one to 1st October; another, 3rd to 4th; four, 3rd; another, 6th to 9th; two, 7th; another, 12th to 15th; two, 12th (I. S. Robertson *et al.*). Out Skerries, 23rd September (J. D. Okill, I. Sandison).

1967 Norfolk Cley, 18th November (D. J. Holman). The individual on 27th November (*Brit. Birds* 61: 353) was first seen on 25th (D. J. Holman).

1968 Scilly St Agnes, two, 23rd October (D. J. Holman).

1970 Norfolk Cley, 27th September (*Brit. Birds* 64: 362), first seen 26th (D. J. Holman).

1976 Dyfed Skokholm, 11th October (M. de L. Brooke, J. R. & Mrs J. M. Lawman). Dowrog Common, St David's, 22nd October (J. W. Donovan).

1977 Norfolk Weybourne, 12th to 13th October (B. M. Holmes, C. Straker). Winterton, 31st December (P. R. Allard).

1977 Scilly St Mary's, 24th October (J. Martin, Miss E. Midgely *et al.*); another two, 24th to 29th; another, 29th (C. D. R. Heard *et al.*).

(West Siberia east to Manchuria and southeast to New Zealand, also Africa) Also one on Dursey Island, Co. Cork, on 12th October. After the flood of records in 1977, this Asian vagrant was once again rather scarce with, as of old, the bulk occurring in Shetland.

Tawny Pipit *Anthus campestris* (120, 393, 10)

Dyfed Ramsey Island, 18th September (R. E. & Mrs A. Scott).

East Sussex Beachy Head, 29th April (D. S. Flumm).

Kent Sandwich Bay, 16th August (D. C. Gilbert, W. G. Harvey). St Margaret's Bay, 2nd September (R. E. Turley). Dungeness, 6th to 11th and 14th September (N. Riddiford *et al.*).

Scilly St Mary's, 4th May (D. B. Hunt); another, 27th (S. Pilbeam); 17th to 19th September (P. R. Jepson, D. G. H. Mills, B. J. & Mrs L. A. Short *et al.*).

Shetland Fair Isle, 1st to 3rd June (M. S. Chapman, W. E. Fletcher, A. Graham *et al.*).

1977 Gwynedd Aber, 26th to 29th November (Dr P. J. Dare, C. R. Linfoot, G. G. Williams *et al.*).

1977 Scilly St Mary's, 10th September (I. C. & Mrs D. E. Gardner).

(Europe, south Asia and northwest Africa) Also one on Dursey Island, Co. Cork, on 14th October. The least showing since 1966.

Olive-backed Pipit *Anthus hodgsoni* (1, 10, 1)

Scilly Tresco, 22nd to 23rd October (M. A. Blick, J. P. Guest, P. A. Walton *et al.*).

(Northeast Russia to central and east Asia) The sixth consecutive year that this species has occurred and the third in as many years in Scilly. The first British record, on Skokholm, Dyfed, on 14th April 1948, has only recently been resolved (*Brit. Birds* 72: 2-4). It seems possible that occurrences of this pipit will soon overhaul the largely sympatric Pechora Pipit *A. gustavi*.

Pechora Pipit *Anthus gustavi* (13, 10, 1)

Shetland Fair Isle, 8th September (P. J. Ewins, I. S. Robertson *et al.*).

(Northeast Russia, across Siberia to Bering Strait) The usual locality for this skulking pipit, but rather earlier than most records.

Red-throated Pipit *Anthus cervinus* (30, 96, 3)

Orkney Mull Head, Papa Westray, 4th June (D. C. Wood).

Shetland Fair Isle, 27th to 29th May, trapped 27th (P. J. Ewins, R. J. Johns, I. S. Robertson *et al.*); another, 1st June (G. Armstrong, I. S. Robertson).

1977 Humberside Spurn, 29th May (N. A. Bell, G. E. Dobbs, P. Higson *et al.*).

1977 Scilly Bryher, 18th October, apparently same, Tresco, 19th October (D. I. M.).

Wallace), but not same as those St Agnes, 14th to 17th (*Brit. Birds* 71: 514).

(Arctic Eurasia) Many fewer than in recent years and the lack of any autumn records is noteworthy.

Yellow Wagtail *Motacilla flava* (3, 8, 1)

Cornwall Near Polzeath, adult ♂, showing characters of the distinctive subspecies *M. f. feldegg*, colloquially known as Black-headed Wagtail, 5th June (A. D. & I. A. Callender, S. M. Christophers).

(Balkans, south Russia and Asia Minor to Afghanistan) Of the 12 British records, 11 have been in spring and summer; the other was in October.

Citrine Wagtail *Motacilla citreola* (2, 23, 1)

Shetland Fair Isle, immature, 14th to 20th October, trapped 16th (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*).

1977 Lincolnshire Gibraltar Point, ♂, 22nd May (P. Leonard).

(Northeast and east Russia, west Siberia and west and central Asia) The 1977 Lincolnshire bird is the first spring record of this species, closely following the male in Essex in July 1976 which was feeding nestling wagtails (*Brit. Birds* 71: 209-213), and possibly reflects the recent westward expansion of the breeding range (*Brit. Birds* 72: 42-43). Another spring record and five further autumn records remain under consideration by the Committee, delays being due to the fact that identification criteria are still far from satisfactorily established.

Alpine Accentor *Prunella collaris* (29, 4, 2)

Dorset Portland, 8th to 30th April, trapped 11th (S. N. Delaney, I. S. Robertson, R. K. Treeby *et al.*) (plate 223).



223. Alpine Accentor
Prunella collaris, Dorset,
April 1978 (I. S.
Robertson)

Norfolk Sheringham, 30th April to 4th May, trapped 1st (K. B. Shepherd *et al.*).

(Mountains in Iberia and northwest Africa, the Alps, east to Japan) After 29 prior to 1958, there was one in 1959, then singles in 1975, 1976 and 1977, and now come two further spring records.

Thrush Nightingale *Luscinia luscinia* (2, 36, 2)

Fife Isle of May, 6th to 8th May, trapped 6th (N. K. Atkinson, M. V. A. Martin, M. Nicholl).

Shetland Fair Isle, 24th May (G. Armstrong, J. Potter, I. S. Robertson *et al.*).

(Scandinavia, east Europe and west Asia) Two typical records.

Siberian Rubythroat *Luscinia calliope* (0, 2, 0)**1977 Lincolnshire** Donna Nook, 14th October (R. Lorand).

(Siberia and Japan west to Urals, sporadically European Russia) Hot on the tail of the first record, on Fair Isle from 9th to 11th October 1975, comes the second individual of this gem of the northern forests. This and the next-listed record are not only a fine example of the satisfaction gained by a small group of observers who work their 'home patch' day in, day out, but also a good example of brotherly rivalry.

Red-flanked Bluetail *Tarsiger cyanurus* (3, 4, 1)**Lincolnshire** Donna Nook, immature ♀, 10th October (S. Lorand).

(Northeast Europe, across Asia to Japan) Only the eighth ever and the third in three years; all but one have occurred in autumn.

Stonechat *Saxicola torquata* (1, 20, 10)

Individuals showing the characters of one or other of the eastern races *S. t. maura* or *stejnegeri*, colloquially known as Siberian Stonechats, were recorded as follows:

Humberside Flamborough Head, adult ♂, *S. t. stejnegeri*, 1st May (P. A. Lassey, Miss I. Smith, D. I. M. Wallace); ♂, possibly intermediate *S. t. maura* × *stejnegeri*, 25th May (A. Grieve, P. A. Lassey, Miss I. Smith).

Lincolnshire Donna Nook, adult ♂, probably *S. t. stejnegeri*, 23rd May (K. Atkin, S. Lorand); immature ♂, indeterminate, 7th to 8th October (K. Atkin, P. Haywood, S. Lorand) (plate 224).

224. Immature male Stonechat *Saxicola torquata* of one of the eastern races, Lincolnshire, October 1978 (Keith Atkin)



Northumberland Low Hauxley, ♀ or immature, indeterminate, trapped, 1st October (B. Galloway, J. Hallewell, E. R. Meek).

Scilly St Mary's, ♀ or immature, indeterminate, 18th October (J. A. Lucas *et al.*), presumed same, 30th to 31st October (P. D. Round *et al.*).

Shetland All ♀♀ or immatures of indeterminate race. Fair Isle, 14th October (P. J. Ewins). Whalsay, 30th September to 1st October; 15th October to 5th November (Dr B. Marshall *et al.*); 21st to 28th October (Dr B. Marshall, J. D. Okill).

1977 Fife Isle of May, adult ♀, *S. t. maura*, 7th October (G. W. & R. Follows).

1977 Shetland Fair Isle, ♀ or immature, indeterminate, 10th October (R. A. Broad, M. A. Peacock, M. P. Sutherland).

(Eastwards from northeast Russia) These ten records set a new level of

occurrence for these vagrants from the east; there is only one previous spring record.

Isabelline Wheatear *Oenanthe isabellina* (1, 1, 0)

1977 Norfolk Winterton, 28th May (P. R. Allard, T. E. Boulton, A. J. Lawrie).

(Southeast Europe east to Mongolia) The sole previous record was at Allonby, Cumbria, on 11th November 1887. Clarification of the field characters of this species (*Brit. Birds* 72: 5-6) may lead to further successful identifications.

Pied Wheatear *Oenanthe pleschanka* (3, 2, 1)

Norfolk Winterton, immature ♂, 28th May (P. R. Allard, D. J. Holman).

(Southeast Europe and south-central Asia) Only the sixth ever and the first in spring. This and the previous-listed record on the same date in 1977 provide just reward for the perseverance of two or three observers with their 'home patch'.

Desert Wheatear *Oenanthe deserti* (11, 9, 1)

Norfolk Cley, adult ♂, 14th to 17th October (P. A. Brown, S. J. M. Gantlett, T. A. Walsh *et al.*) (plates 225 & 226).

(North Africa, northwest Arabia, and east to Mongolia) The ten records since 1958 have now occurred in all months from September to April.



225 & 226. Adult male Desert Wheatear *Oenanthe deserti*, Norfolk, October 1978 (Jeff Pick)



Eye-browed Thrush *Turdus obscurus* (0, 3, 1)**Strathclyde** Lochwinnoch, ♂, 22nd October (D. L. Clugston).

(Siberia and eastern Asia to Japan) All three previous records of this species were in 1964.

Black-throated Thrush *Turdus ruficollis* (3, 4, 2)**Shetland** Fair Isle, ♂, *T. r. atrogularis*, 17th October (N. R. Jones, R. A. Williams).**Staffordshire** Locality withheld, in north of county, immature, *T. r. atrogularis*, trapped, 26th November (D. Emley, D. James, W. Low *et al.*).**1977 Shetland** Loch of Hillwell, 6th to 12th November (*Brit. Birds* 71: 518), last seen 14th November (per J. D. Okill).

(Central Asia) After single records in 1868, 1879 and 1957/58, this Asian thrush has now appeared in five consecutive years; the dates of these two are typical.

Cetti's Warbler *Cettia cetti* (0, 414, —)**1976 Devon** South Milton Ley, 24th October to at least 13th November, two, 23rd December, including ♀ trapped; at least one to end of year (R. Burrige).**1976 Dorset** Portland, 11th October (K. W. Parker). West Bexington, additional to those already accepted (*Brit. Birds* 70: 431): ♂, possibly two ♂♂, 22nd November to 28th December; three ♂♂, 5th; four ♂♂ and one other, 9th (C. Cook).**1976 Kent** Sandwich, 7th to 17th November, trapped 17th (L. J. Davenport, J. H. van der Dol *et al.*).**1976 West Sussex** Arundel Wildfowl Refuge, 31st October to at least 27th December; two, 9th November (R. M. Billings, S. C. Richardson *et al.*).

(South and west Europe, southwest Asia and northwest Africa) These additions augment the documentation of records up to 1976, when the species was removed from the list considered by the Committee.

Pallas's Grasshopper Warbler *Locustella certhiola* (3, 2, 0)**1976 Norfolk** Cley, 13th September (G. Smith).(Western Siberia and central Asia to Japan) This additional 1976 record, only the fourth ever, partners that on Fair Isle, Shetland, from 20th to 24th September 1976 (*Brit. Birds* 70: 433), which now becomes the fifth.**Lanceolated Warbler** *Locustella lanceolata* (9, 14, 3)**Shetland** Fair Isle, 8th September (C. J. McCarty, I. S. Robertson, J. Ryan *et al.*); immature, 29th September to 1st October, trapped 29th (A. Graham, I. S. Robertson, C. R. Robson *et al.*). Out Skerries, immature, trapped, 23rd September (J. D. Okill *et al.*).**North Sea** Forties Oilfield, 145 km E of Aberdeen, Grampian, 57° 40'N 0° 20'E, immature, trapped, 14th October (Dr W. R. P. Bourne, Dr A. G. Knox).

(East Eurasia, from central Russia to north Japan) Three records typical of recent years from the usual localities, and one as a pleasant surprise for visitors to a North Sea oil-platform; this latter, excluded from the total of British records, was well on its way to Shetland, where all but two of the grand total have been discovered.

Savi's Warbler *Locustella luscinioides* (many, 207, 38)**Devon** Slapton Ley, two ♂♂, 15th April; another, at least 29th (R. M. Belringer, M. R. Edmonds *et al.*). South Milton Ley, ♂, 27th April to 24th May, trapped 11th (R. Burrige).**Dorset** Radipole, ♂, 20th May (M. Cade).**Hampshire** Locality withheld, at least seven: four, possibly six ♂♂, 5th May to 18th July; ♂

and ♀ trapped, 1st July, and juvenile trapped, 6th; two, possibly three, pairs bred (observers' names withheld).

Humberside Flamborough Head, 6th May (P. A. Lassey, Miss I. Smith).

Kent Stodmarsh and Middle Stour area, 22nd April onwards, maximum eight ♂♂, seven probably and five definitely paired, three proved breeding (per W. G. Harvey).

Norfolk Winterton, ♂, 2nd to 11th May (P. R. Allard).

Suffolk Walberswick, ♂, 21st May onwards; juvenile trapped, 20th August (per D. R. Moore). Minsmere, 2nd May onwards, maximum of two ♂♂, two pairs probably bred (per D. R. Moore).

County withheld Locality withheld, four ♂♂: 28th April to at least 1st May; 20th May to at least mid July; three, 14th June to at least mid July (observers' names withheld).

County withheld Locality withheld, ♂, 3rd to 21st May (observers' names withheld). Same site as 1977, locality withheld, see below.

1977 Cambridgeshire Wicken Fen, ♂, 1st August (I. R. Walker).

1977 County withheld Locality withheld, ♂, 6th June to 5th July (observers' names withheld).

(Europe, west and central Asia and northwest Africa) Further consolidation by this reedbed reeler; the second consecutive year with around 30 singing males.

Aquatic Warbler *Acrocephalus paludicola* (47, 457, 12)

Cheshire Frodsham, immature, trapped, 20th August (R. G. Bertera, B. E. Murray).

Cornwall Marazion, two immatures, 12th August (P. D. Round); another, 25th to 29th August (W. R. Hirst, P. D. Round). Long Rock, Marazion, immature, trapped, 31st August (B. Pattenden).

Devon Slapton Ley, 3rd September (D. J. Hopkins, Mr & Mrs J. Woodland).

Dorset Radipole, adult and immature, trapped, 23rd August (R. E. Scott *et al.*).

Shetland Fair Isle, immature, trapped, 14th August; another, 16th to 17th August, trapped 16th (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*).

Somerset Steart, immature, trapped, 31st August; another, trapped, 5th September (A. W. Evans).

1972 Scilly St Mary's, 8th October (*Brit. Birds* 66: 348), last seen 9th (D. J. Holman *et al.*).

1975 East Sussex Locality withheld, nine immatures trapped: three, 10th August; two, 11th; two 17th; another 18th; another 4th September, remaining to 5th (J. Willsher *et al.*).

1977 Dorset Portland, two immatures, 14th August (R. J. & Mrs S. M. Johns), additional to adult and immature already accepted (*Brit. Birds* 71: 519).

1977 Norfolk Waxham, 25th September (R. A. Butler, J. Whitelegg).

(East Europe and Urals) Although several ringing-groups are tardy in submitting their records from English south coast reedbeds, this total of just 12 individuals falls well short of the figures for recent years.

Great Reed Warbler *Acrocephalus arundinaceus* (23, 81, 9)

Dorset Corfe Mullen, 19th June (C. Cook, Dr G. P. Green *et al.*).

East Sussex Rye, in song, 23rd to 30th May (P. F. Bonham *et al.*).

Gwynedd Locality withheld, ♂, trapped, 30th July (observer's name withheld).

Kent Dungeness, 6th May (W. E. Blake, S. R. & K. Perry *et al.*). Stodmarsh, in song, 1st to 2nd June (W. G. Harvey, C. H. Hindle, H. Shorrocks *et al.*).

Norfolk Locality in west, in song, 23rd May to 10th June (P. Gotham, Dr J. Lines).

Northamptonshire Ravensthorpe Reservoir, 20th May (C. J. Coe, R. J. Cross, N. McMahon *et al.*).

Scilly St Mary's, 12th October (P. Goriup, C. R. Ireland, Z. Karpowicz).

Shetland Fair Isle, 2nd to 6th June, trapped 2nd (M. S. Chapman, W. E. Fletcher, I. S. Robertson *et al.*).

(Europe, southwest and east Asia, north Africa) A good showing, equalling the previous best year, 1969. The individual in Scilly was only the

third late autumn occurrence, all of which have been in the southwest.

Booted Warbler *Hippolais caligata* (1, 8, 1)

Humberside Kilnsea, trapped, 9th September (J. S. George, D. Hursthouse, B. R. Spence *et al.*).

(Northwest Russia, east to Mongolia and south to Iran) This is only the third record outside Shetland; the date is typical.

Subalpine Warbler *Sylvia cantillans* (12, 61, 1)

Cleveland Lovell Hill, Redcar, ♀, trapped, 28th May (S. C. Norman).

1977 North Yorkshire Burniston, near Scarborough, 25th September (M. Francis).

(South Europe, west Turkey and northwest Africa) A typical record; the least showing since 1969, but records of three ringed individuals have not yet been received by the Committee.

Rüppell's Warbler *Sylvia rueppelli* (0, 1, 0)

1977 Shetland Dunrossness, Mainland, 13th August to 16th September (R. P. Martins, J. D. Okill *et al.*).

(Coastal regions of east Mediterranean) The first British record of this distinctive warbler which has a very restricted breeding range. It was in heavy moult when discovered and is very likely to have reached Shetland in the late spring, remaining undetected throughout the summer. Full details will be published in due course.

Greenish Warbler *Phylloscopus trochiloides* (13, 113, 5)

Devon Lundy, in song, 13th to 14th July (M. & Mrs W. Rogers); another, 8th August (A. M. Taylor).

Man Calf of Man, in song, 22nd to 24th June (G. D. Elliot, P. P. Jennings).

Scilly St Agnes, 20th October to 3rd November (P. Loud, C. J. Mackenzie-Grieve, J. Miller *et al.*).

Shetland Fair Isle, adult, trapped, 4th August (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*).

1977 Humberside Flamborough Head, 21st to 23rd August (A. Grieve, P. A. Lassey *et al.*).

(Eurasia east from northern Germany) Two singing males in summer, including the third such on the Calf of Man in the last five years, and a meagre scatter of autumn individuals. The long-awaited identification paper covering this difficult species and its confusing relatives is still in preparation, but see *Brit. Birds* 72: 473-474.

Arctic Warbler *Phylloscopus borealis* (19, 76, 4)

Highland Wick River, 7th to 8th September (K. W. Banks, S. G. Mackay, G. F. Oatman *et al.*).

Humberside Humberstone Fitties, 10th October (G. P. Catley).

Shetland Sumburgh, 1st to 2nd September, trapped 1st (F. Lambert, J. D. Okill *et al.*). Fair Isle, 28th September (T. R. & Mrs A. Cleaves, P. J. Ewins, I. S. Robertson *et al.*).

(North Fenno-Scandia east to Alaska) Four typical records; this species, which migrates southeast from its breeding grounds which extend as near as northern Scandinavia, shows no sign of increased occurrences.

Pallas's Warbler *Phylloscopus proregulus* (3, 109, 2)

Kent Sandwich Bay, 28th October (M. K. Briggs, J. H. van der Dol). Dungeness, trapped.

6th November (T. Collins, N. Riddiford).

(Central, east and southeast Asia) A very lean year for this mite from Asia, but all the other vagrants from similar regions were equally few and far between.

Radde's Warbler *Phylloscopus schwarzi* (1, 22, 2)

Humberside Spurn, 14th to 16th October, trapped 14th (J. Adlard, B. R. Spence, R. Sturman *et al.*) (plate 227).



227. Radde's Warbler *Phylloscopus schwarzi*, Humberside, October 1978 (J. W. Hartley)

Norfolk Holkham, 14th to 15th October (S. J. M. Gantlett *et al.*).

(Central and east Asia) These two take the grand total to 25, precisely the same as that of its close relative, the Dusky Warbler.

Dusky Warbler *Phylloscopus fuscatus* (1, 23, 1)

Kent Sandwich Bay, 11th to 15th November (D. M. Batchelor, N. V. McCanch, J. H. van der Dol *et al.*).

(Central and northwest to southeast Asia) The latest ever, by one day.

Willow Tit *Parus montanus* (1, 1, 0)

An individual showing the characters of the northern race *P. m. borealis* was recorded as follows:

1975 South Yorkshire Thorne Moors, 8th February (C. D. R. Heard).

(Scandinavia east to northwest Siberia) This is the only recent documented record of this frosty-plumaged race from Scandinavia.

Wallcreeper *Tichodroma muraria* (6, 3, 0)

Somerset Cheddar, from early November 1977 (*Brit. Birds* 71: 522), remained until 9th April (per B. Rabbits).

1977 Somerset See above.

(Central southern Eurasia, discontinuously from the Pyrénées to China) Despite early rumours, this individual did not reappear for a third winter.

Short-toed Treecreeper *Certhia brachydactyla* (0, 5, 2)

Kent Dungeness, 7th to 10th October, two, both trapped 7th (A. J. Greenland, N. Riddiford *et al.*).

(Central and south Europe, Asia Minor and north Africa) These two individuals are the sixth and seventh to have been accepted since the criteria needed for differentiation from the Treecreeper *C. familiaris* were finally established and published (*Brit. Birds* 69: 117-131).

Penduline Tit *Remiz pendulinus* (0, 2, 0)

1977 Scilly St Agnes, juvenile, 25th October (P. A. Dukes) (*Brit. Birds* 72: 483-484).

(Scattered from western Europe east to Manchuria) Only the second record of this most elusive species, the first being at Spurn, Humberside, from 22nd to 28th October 1966. Despite the efforts of over a hundred observers, only the finder, an autumn habitué of St Agnes, was fortunate.

Isabelline Shrike *Lanius isabellinus* (1, 9, 3)

Cambridgeshire Hemingford Grey, adult ♂ showing characters of *L. i. isabellinus*, 8th October (J. S. Clark).

Dorset Winspit, 14th to at least 24th October, trapped 16th (M. C. & P. Combridge, T. Squire, M. A. Stewart *et al.*) (plate 228).

228. Isabelline Shrike
Lanius isabellinus,
Dorset, October 1978
(S. G. D. Cook)



229. Immature Isabelline Shrike *Lanius isabellinus*, Lincolnshire, October 1978 (Keith Atkin)

Lincolnshire Donna Nook, immature, 28th to 30th October (K. Atkin, R. & S. Lorand, C. Morrison *et al.*) (plate 229).

1976 Suffolk Benacre, immature showing characters of *L. i. phoenicuroides*, 30th August (B. J. Brown, D. R. Moore, C. S. Waller).

1977 Humberside Flamborough Head, immature showing characters of *L. i. phoenicuroides*, 21st August (D. I. M. Wallace).

(South Asia to China) Three in one year is the highest-ever annual total. A paper on the taxonomy of the Isabelline and related shrikes by Professor Dr K. H. Voous will be published shortly. If confronted by one of these shrikes in the field, observers should be aware of the possibility of the Brown Shrike *L. cristatus* occurring in western Europe.

Lesser Grey Shrike *Lanius minor* (32, 75, 2)

Oxfordshire Standlake, 17th June (S. G. Perry).

1977 East Sussex Rye, 3rd June (P. F. Bonham, B. Grimes, R. C. Knight *et al.*).

1977 Suffolk Near Lakenheath, 4th June (*Brit. Birds* 71: 523); observers included D. C. Palmer, not D. T. Palmer as stated.

(South and east Europe and southwest Asia) Also one on Great Saltee, Co. Wexford, on 30th May, only the second Irish record. The additional 1977 record takes the total for that year to seven, the most ever.

Woodchat Shrike *Lanius senator* (101, 266, 7)

Devon Slapton, immature, 4th to 8th November (R. M. Belringer *et al.*).

Dorset Portland, immature, 20th August (M. Rogers, E. T. Welland *et al.*).

Kent Dungeness, 4th May (N. Riddiford *et al.*).

Lancashire Rossall Farm School, Fleetwood, 1st June (R. A. Cadman).

Lincolnshire Donna Nook, immature, 6th August (S. Lorand).

Norfolk Holme, 1st June (P. R. Clarke).

Scilly Bryher, 24th April to 1st May (D. B. Hunt *et al.*).

1976 Scilly St Mary's, immature, 4th to 9th September (L. J. Degnan, R. Drew *et al.*).

1977 Suffolk Minsmere, 5th to 11th June (A. R. J. Paine *et al.*).

(West, central and south Europe, southwest Asia and north Africa) Well below the annual average since 1958. The Devon record is the latest ever.

Nutcracker *Nucifraga caryocatactes* (45, 349, 3)

Cumbria Bowness-on-Windermere, 22nd October (J. R. Faunt).

Greater Manchester Hindley, 9th October (B. Winstanley).

Norfolk Gunton, at least one, 6th October (I. W. Corfe).

1977 Suffolk Somersham, 31st December (Rev. R. W. Francis).

(Eurasia from Scandinavia and the Alps to Kamchatka and China) Since the great invasion of 1968-69, there had been just seven records, involving 12 individuals, until these three; the dates are typical.

Rose-coloured Starling *Sturnus roseus* (160, 91, 3)

Buckinghamshire Bletchley, adult, 7th November (R. Lovell).

Hertfordshire Cheshunt, adult, 4th December (Mrs M. Parcell).

Scilly St Mary's, juvenile, 10th to at least 12th October (D. Page, R. Tidman *et al.*).

1975 Dyfed Treginnis, adult, 29th July (P. Bagguley, G. Sellors *et al.*), presumed additional to adult, Devil's Bridge, 100 km NE, 25th to 26th July (*Brit. Birds* 69: 353).

1977 Merseyside Formby, adult, 2nd August (A. H. J. Harrop).

(Southeast Europe and southwest Asia) Three is rather below average; the lateness of the records is unusual, July and August occurrences being most frequent.

Red-eyed Vireo *Vireo olivaceus* (1, 7, 2)

Scilly St Mary's, immature, 11th October (I. Burrows, C. Leach, P. Rolph *et al.*).

(North America) Also one on Cape Clear Island, Co. Cork, from 27th September to 2nd October, the third Irish record. The Scilly bird was the fourth for that archipelago.

Serin *Serinus serinus* (76, 237, 31)

Cornwall Marazion, two ♂♂, 23rd April (W. R. Hirst, L. P. Williams *et al.*).

Devon Prawle Point, 3rd May (D. L. Davenport). Lundy, ♂, 3rd May (M. Rogers, A. M. Taylor). Locality withheld, pair, 11th May (R. Burrige). Lannacombe, ♂, 5th to 11th June (A. J. Bundy, D. E. Paull, R. H. Ryall *et al.*). Locality in south, pair, 8th May, later bred, rearing six young in two broods, last seen 1st October (V. R. Tucker *et al.*).

Dorset Portland, 8th April (I. S. Robertson). Hengistbury Head, ♂, 2nd to 3rd May (F. D. Holmes, I. E. Mackay).

Dyfed Skokholm, ♂, 11th May (Mrs J. M. Lawman).

East Sussex Beachy Head, ♂, 1st May (D. S. Flumm); ♂ or ♀, 9th May (T. W. Parmenter, M. J. Rogers); ♂, 10th May (D. A. Parmenter, M. J. Rogers *et al.*).

Hereford & Worcester Near Evesham, ♂ and at least one other, 17th to 18th June (A. W. B. Nelson).

Humberside Spurn, ♂, trapped, 14th February (B. R. & Mrs C. Spence).

Kent Canterbury, ♂, 23rd April (W. G. Harvey). Dungeness, 3rd June, possibly another 4th (H. A. R. Cawkell, N. J. Pleass, N. Riddiford *et al.*).

Norfolk Sheringham, immature, 18th August (K. B. Shepherd). Holme, ♀, 28th to 29th May (P. R. Clarke); ♀, 7th September (P. R. Clarke, R. Pitts, M. Rooney).

West Sussex Littlehampton, ♂, 14th January to 2nd May; another ♂, 9th to at least 20th April (A. S. Ciok, R. Grimmet *et al.*).

Wight St Catherine's Point, ♂, 25th April (D. B. Wooldridge).

1968 Cornwall Lelant, four, 6th January (*Brit. Birds* 62: 487), one to 13th (D. J. Holman).

1977 Kent Dungeness, two, 22nd May (K. Redshaw).

(West, central and southern Europe, Asia Minor and northwest Africa)
By two or three, this is the highest annual total of this delightful little finch, as usual largely restricted to English south coast counties. The successful rearing of two broods by a pair in Devon is only the third published record of proved breeding in Britain and Ireland, the previous ones being in Dorset and Sussex.

Arctic Redpoll *Carduelis hornemanni* (30, 54, 1)

Kent Sevenoaks, 29th April (the late Dr J. G. Harrison).

1973 Norfolk Cley, 5th January (C. D. R. Heard).

(Circumpolar Arctic) Most records are during October to January.

Scarlet Rosefinch *Carpodacus erythrinus* (200, 421, 23)

Borders St Abb's, ♀ or immature, 6th September (R. G. Nisbet, S. Ward).

Highland Golspie, first-year ♂, in song, 9th to 26th June (A. R. Mainwood). Noss Head, Caithness, ♀ or immature, 7th September (K. W. Banks, S. G. Mackay, G. F. Oatman *et al.*).

Humberside Flamborough Head, ♀ or immature, 9th to 11th September (P. A. Lassey, S. Rooke, D. I. M. Wallace).

Scilly St Mary's, ♀♀ or immatures, 5th to 11th October (H. P. K. Robinson *et al.*); 6th October (R. M. Belringer, J. C. Nicholls).

Shetland All ♀♀ or immatures: Grutness, 2nd June (J. D. Okill). Fair Isle, 4th June (P. J. Ewins); 8th June, trapped (I. S. Robertson); two, 5th September; another 7th to 8th; another 29th to 1st October (I. S. Robertson *et al.*). Fetlar, 18th to 19th August (J. N. Dymond). Whalsay, 6th September (Dr B. Marshall). Uyeasound, Unst, 7th September, probably same, 9th to 10th (I. Spence). Out Skerries, two, 8th September (J. A. Ginnever, Dr B. Marshall, E. Tait); another, 10th (E. Tait); 27th (C. Roberts); another 30th (M. Heubeck, J. D. Okill, E. Tait).

1974 Norfolk Walsey Hills, Salhouse, ♀ or immature, 27th May (*Brit. Birds* 68: 331); the correct date was 26th May (per D. J. Holman, D. B. Rosair).

1977 Northumberland Low Hauxley, ♀ or immature, 18th September (S. W. Anderson, P. Morris, R. Temple). Low Hauxley, ♀ or immature, 25th September (*Brit. Birds* 71: 525), also 26th and 28th (E. R. Meek).

1977 North Yorkshire Gouthwaite Reservoir, first-year ♂, in song, June (P. J. Carlton, A. O'Neill).

1977 Scilly Bryher, ♀ or immature, 15th September (I. C. Gardner).

1977 Shetland Whalsay, 22nd and 26th May (*Brit. Birds* 71: 526): observers on these dates did not include the late J. H. Simpson. Out Skerries, nine, all ♀ ♀ or immatures (*Brit. Birds* 71: 526): the total is reduced to six by the deletion of records for 24th and another 26th August (D. Coutts, J. D. Okill) and another 17th to 19th September, published in error. Additionally, the correct dates for another, 23rd to 24th September, were 24th to 26th September. Boddam, ♀ ♀ or immatures, 20th to 23rd August, two, 20th (*Brit. Birds* 71: 526): the observers included P. J. Ewins, not D. Coutts. Durrigarth, ♀ or immature, 27th August (*Brit. Birds* 71: 526): the observers included P. J. Ewins, not D. Coutts.

(East Europe and across Asia, and east Turkey to Himalayas) Also singles on Dursey Island, Co. Cork, on 12th and 29th October. A reversal of recent trends: four in spring is just below the average for recent years, while 19 in autumn is well below the recent average. A late 1977 record concerns one on Copeland Island, Co. Down, on 3rd July, only the third ever in that month.

Black-and-white Warbler *Mniotilta varia* (1, 2, 1)

(North America) None in Britain, but one on Cape Clear Island, Co. Cork, on 18th October, the first Irish record.

Cape May Warbler *Dendroica tigrina* (0, 1, 0)

1977 Strathclyde Paisley, 17th June (T. Byars, H. Galbraith).

(North America) The first British record of this North American species, and in an unlikely location for a rarity. Full details will be published shortly.

White-crowned Sparrow *Zonotrichia leucophrys* (0, 2, 0)

1977 Humberside Hornsea Mere, 22nd May (R. G. Hawley, R. J. Walker, G. C. M. Yates).

1977 Shetland Fair Isle, 15th to 16th May, trapped 15th (R. A. Broad, J. Potter *et al.*).

(North America) Long anticipated, it seemed only a question of time before this close relative of the following species occurred in Britain or Ireland; and spring was the best bet. Then, two were discovered in the space of a week. Full details will be published in due course.

White-throated Sparrow *Zonotrichia albicollis* (1, 10, 1)

Shetland Fair Isle, trapped, 17th June (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*) (plate 230).

(North America) The sixth spring occurrence out of a total of 12.

Rustic Bunting *Emberiza rustica* (34, 82, 8)

Fife Isle of May, ♂, 22nd to 24th May (E. Idle, D. J. Norden).

Humberside Flamborough Head, ♂, 21st to 23rd May, trapped 22nd (P. A. Lassey, Miss I. Smith, D. I. M. Wallace *et al.*); another, 4th June (P. A. Lassey).

Lincolnshire Gibraltar Point, immature ♂, trapped, 1st October (P. R. Boyer, R. Lambert *et al.*).

Shetland Out Skerries, ♂, 16th to 17th May (J. F. Cooper, A. R. Lowe, W. E. Oddie). Fair Isle, ♂, 1st June (R. J. & Mrs S. M. Johns, I. S. Robertson, Mr & Mrs J. Woodland); immature ♂, trapped, 5th October (R. Bereta, M. Ellis, I. S. Robertson *et al.*); another. 12th to 16th October (N. R. Jones, C. Mason, I. S. Robertson *et al.*).

1976 Shetland Sumburgh, ♂, 26th May (*Brit. Birds* 71: 527), first seen 21st May (per P. K. Kinnear).

(Northeast Europe across north Asia) Eight typical records is a return to form after just two in 1977.

Little Bunting *Emberiza pusilla* (94, 146, 5)

Scilly St Mary's, 12th October (J. B. Kemp, D. Page, R. Tidman), probably same. St Agnes, 13th to 14th October (P. J. Grant, V. A. Lister, G. G. Williams *et al.*). Gugh, 21st October (J. E. Fortey, P. G. & Mrs C. M. Lansdown). St Mary's, 31st October (C. Byers, R. P. Martins).

Shetland Fair Isle, 30th September to 2nd October (T. R. Cleaves, P. J. Ewins, I. S. Robertson *et al.*).

Surrey Poyle, near Staines, 8th to 14th April (A. V. Moon, P. Naylor *et al.*).

(Northeast Europe and north Asia) About the average since 1958, although in the previous two years there were exceptional totals of 18 and 23. Occurrences are far fewer in spring than in autumn.

Yellow-breasted Bunting *Emberiza aureola* (10, 65, 7)

Fife Isle of May, ♀ or immature, 6th September (T. Dougall).

Shetland Fair Isle, four ♀ ♀ or immatures: 5th to 8th September; 8th; 9th to 10th; and 10th (P. J. Ewins, I. S. Robertson, R. A. Williams *et al.*). Out Skerries, two ♀ ♀ or immatures, 8th and 10th September, one 9th presumed same (J. A. Ginnever, Dr B. Marshall, E. Tait).

1977 Northumberland Low Hauxley, ♀ or immature, 29th September (B. Little).

(Northeast Europe across north Asia) These seven maintain the recent surge of records. The late 1977 acceptance takes the total for that year to ten.

230. White-throated Sparrow *Zonotrichia albicollis*, Shetland, June 1978 (I. S. Robertson)



Pallas's Reed Bunting *Emberiza pallasi* (0, 1, 0)

1976 Shetland Fair Isle, immature, 29th September to 11th October, trapped 10th (R. A. Broad, S. G. D. Cook, A. R. Lowe *et al.*).

(Central and eastern Siberia south to Mongolia) Yet another first British record falls to Fair Isle, but the identity of this completely unexpected vagrant was not finally resolved until 11 days after it had been first seen,

when it was trapped and examined in the hand. We hope that full details will be published soon.

Black-headed Bunting *Emberiza melanocephala* (9, 38, 4)

Dorset Portland, ♂, trapped, 9th May (F. R. Clifton, S. N. Delaney, T. Squire *et al.*).

Man Calf of Man, ♂, 1st June (G. D. Elliot, P. P. Jennings).

Shetland Strand, ♂, 2nd June to 22nd July, trapped (A. Graham, J. D. Okill). Fair Isle, ♂, 11th to 15th August (I. S. & Mrs S. Robertson, R. A. Williams *et al.*).

1977 Northumberland Low Hauxley, ♂, 26th July (T. Cadwallender, A. Heavisides).

1977 Scilly St Mary's, ♀ or immature, 14th October (D. J. Barker, M. J. Grigson, S. C. Hutchings).

(Southeast Europe and southwest Asia) Four typical records. The additional record from Scilly is the latest ever.

Appendix 1. Category D species accepted (see *Brit. Birds* 64: 429)

Saker *Falco cherrug* (0, 0, 1)

Shetland Fetlar, 27th to 29th May (J. F. Cooper, J. N. Dymond).

(East-central Europe south to Iran and east to Siberia) The first, but unfortunately the risk of captive origin is regarded as high, so, despite the locality, date and other eastern species at that time, this handsome falcon is placed, for the present, in category D.

Blue Rock Thrush *Monticola solitarius* (0, 2, 0)

1977 East Sussex Rye, 10th August (P. Perkins).

(Southern Europe, southern Asia and northwest Africa) The second British record of this mainly sedentary thrush, but the high likelihood of its being an escape from captivity prevents its upgrading from category D.

Painted Bunting *Passerina ciris* (0, 2, 0)

1974 Lancashire Carnforth, 2nd to at least 6th April (J. A. G. Barnes *et al.*).

(North America) The previous record of this common cage-bird was in Shetland in May 1972.

Appendix 2. List of records not accepted

This list contains all current records not accepted after circulation to the committee. It does not include (a) those withdrawn by the observer(s) without circulation, after discussion with the honorary secretary; (b) those which, even if circulated, were not attributed by the observer(s) to any definite species; or (c) those mentioned in the monthly summaries in this journal, if full details were unobtainable. Birds considered to be escapes are also omitted.

In the vast majority of cases, the record was not accepted because we were not convinced, on the evidence before us, that the identification was fully established; in only a very few cases were we satisfied that a mistake had been made.

1978

Albatross sp.

Cley and Salthouse, Norfolk, 20th August

Little Shearwater

Barns Ness, Lothian, 5th August

Cory's Shearwater	St Agnes, Scilly, 13th May Dunure, Strathclyde, 12th June Whitburn, Tyne & Wear, 6th July From MV <i>Scillonian</i> , 8th and 22nd July Sanna Point, Highland, 11th August Fife Ness, Fife, two, 27th August Gibraltar Point, Lincolnshire, 30th August Salhouse, Norfolk, 21st October Lakenheath, Suffolk, 29th August Staines Reservoirs, Surrey, 9th September Exe Estuary, Devon, 5th May Near Totnes, Devon, 14th and 17th September Ware, Hertfordshire, 22nd June Southampton, Hampshire, 17th September Walberswick, Suffolk, two, 30th October
Squacco Heron	Near Whitehaven, Cumbria, 20th July
Night Heron	Islay, Strathclyde, 1st November
Little Egret	Prawle Point, Devon, 29th October
Black Stork	Royden Park, Merseyside, 31st October
White Stork	Covenham Reservoir, Lincolnshire, 24th May Lower Test Marshes, Hampshire, 13th June Near Clevedon, Avon, 3rd September Bulcote, Nottinghamshire, 6th September St Margaret's Bay, Kent, 20th October
Black-shouldered Kite	Tresco, Scilly, 1st May
Short-toed Eagle	Ronas Hill, Shetland, 13th May
Lesser Kestrel	Wrangle, near Boston, Lincolnshire, 17th August Stodmarsh, Kent, 7th May
Red-footed Falcon	Blair Atholl, Tayside, 8th April Chichester Harbour, West Sussex, 26th February Near Quay, Cambridgeshire, 14th September Holme, Norfolk, 14th and 16th May Grangemouth, Central, 3rd September Near Pentraeth, Gwynedd, 11th January Red Rocks, Merseyside, 20th May Benacre, Suffolk, 22nd to 23rd September Cley, Norfolk, 17th October Borth, Dyfed, 18th August Tongue Bay, Highland, 18th August Tresco, Scilly, 27th to 28th September
Saker	Pitsford Reservoir, Northamptonshire, 10th May
Gyr Falcon	Drumburgh, Cumbria, 27th August
Little Crake	Langton Herring, Dorset, 2nd April
Little Bustard	Hickling, Norfolk, 9th to 12th June
Crane	Lytham, Lancashire, 4th November
Black-winged Stilt	Sands of Forvie, Grampian, 3rd January
Black-winged Pratincole	Lundy, Devon, 24th to 29th April
Pratincole sp.	St Agnes, Scilly, 23rd September
Lesser Golden Plover	Otter Estuary, Devon, 31st December
White-tailed Plover	Chew Valley Lake, Avon, 27th September Pagham Harbour, West Sussex, 21st October Chew Valley Lake, Avon, 3rd November Fawley, Hampshire, 1st October
Semipalmated Sandpiper	Wheldrake Ings, North Yorkshire, 15th July
White-rumped Sandpiper	Fladbury, Hereford & Worcestershire, 26th July
Baird's Sandpiper	Hayle, Cornwall, 30th August Grafham Water, Cambridgeshire, 10th December Dunster, Somerset, 22nd September Tring Reservoirs, Hertfordshire, 12th August
Broad-billed Sandpiper	
Sharp-tailed Sandpiper	
Stilt Sandpiper	
Great Snipe	
Long-billed Dowitcher	
Dowitcher sp.	
Greater Yellowlegs	
Lesser Yellowlegs	
Marsh Sandpiper	
Solitary Sandpiper	

Wilson's Phalarope	Whiting Bay, Arran, Strathclyde, 8th March
Long-tailed Skua	Flamborough Head, Humberside, 7th August
	Portland, Dorset, 12th August
	Collieston, Grampian, two, 12th August
	Hornsea, Humberside, 21st August
	Reculver, Kent, 1st October
	Caldy, Merseyside, 1st October
Great Black-headed Gull	Selsey Bill, West Sussex, 7th September
Laughing Gull	Lytham, Lancashire, 17th May
Franklin's Gull	Landguard Point, Suffolk, 21st October
Bonaparte's Gull	Helston, Cornwall, 6th February
	Stanpit Marsh, Dorset, 14th February
	Hayle, Cornwall, 21st April
	Poole Harbour, Dorset, 12th July
	Red Rocks, Merseyside, 16th October
Ring-billed Gull	Foreness Point, Kent, 4th March
Gull-billed Tern	Portland, Dorset, 25th April
	Westbere, Kent, 26th to 28th May
	Minsmere Cliffs, Suffolk, 1st July
	Dungeness, Kent, 13th August
Caspian Tern	Lepe, Hampshire, 11th June
White-winged Black Tern	St David's, Dyfed, 26th April
	Frensham Great Pond, Surrey, 7th September
	Weaver Bend, Cheshire, 13th September
Snowy Owl	Blawick, Cumbria, 25th January
Roller	Chiswick, Greater London, 19th June
Alpine Swift	Ardtreck Point, Skye, Highland, 23rd July
	Rutland Water, Leicestershire, 8th to 10th August
Bimaculated Lark	Mull, Strathclyde, 29th August
Lesser Short-toed Lark	St Mary's, Scilly, 25th October
Red-rumped Swallow	Bough Beech Reservoir, Kent, 30th April
	St Margaret's Bay, Kent, 7th May
	Shipley Lake, Derbyshire, 17th June
Richard's Pipit	Alton Water, Suffolk, 29th April
	Sandwich Bay, Kent, 2nd June
	St Agnes, Scilly, 14th to 15th October
Tawny Pipit	Near Borth, Dyfed, 10th August
	Sidlesham, West Sussex, 25th August
	Portland, Dorset, 6th September
	Flamborough Head, Humberside, 12th October
Red-throated Pipit	Flamborough Head, Humberside, 23rd April
	Cyncoed, South Glamorgan, two, 3rd May
	Near Muckleford, Dorset, 14th September
Rufous Bush Robin	Skokholm, Dyfed, 25th to 28th September
Black-eared Wheatear	Dungeness, Kent, 2nd April
	New Cumnock, Strathclyde, 17th August
Desert Wheatear	Cley, Norfolk, 12th September
White's Thrush	Bognor Regis, West Sussex, late May to 15th June
Veery	St Mary's, Scilly, 19th October
Dusky Thrush	Leckhampton, Gloucestershire, 21st December
Savi's Warbler	Sheringham, Norfolk, 29th April
	Foulness, Essex, 6th May
	Hartland Point, Devon, 18th May
	Walberswick, Suffolk, 13th August
Moustached Warbler	Southampton, Hampshire, 24th August
Aquatic Warbler	Portland, Dorset, 12th August
	Oxford, Oxfordshire, 28th August
Olivaceous Warbler	Skokholm, Dyfed, 10th May
	Beachy Head, East Sussex, 13th August

Booted Warbler	Sheringham, Norfolk, 2nd October
Pallas's Warbler	Martlesham Heath, Suffolk, 13th October
	Flamborough Head, Humberside, 15th October
Bonelli's Warbler	Robinswood Hill, Gloucestershire, 26th May
	Paglesham, Essex, 17th August
	St Nicholas-at-Wade, Kent, 19th August
Short-toed Treecreeper	Epping Forest, Essex, 25th December
Woodchat Shrike	Near Abergorlech, Dyfed, July
	Minster, Kent, 8th October
Nutcracker	Walberswick, Suffolk, 19th August
	Barony, Strathclyde, 12th December
Rose-coloured Starling	Kenley, Surrey, 10th June
Serin	Higher Metcombe, Devon, 22nd February
	Amwell, Hertfordshire, 19th March
	Orcombe Point, Devon, 2nd April
	St David's Head, Dyfed, 26th April
	Buckden, Cambridgeshire, 10th June
	Rye, East Sussex, 14th June
Arctic Redpoll	Old Linslade, Bedfordshire, 18th March
Two-barred Crossbill	Glenfeshie, Highland, 29th May
Scarlet Rosefinch	Bushy Park, Greater London, two, 14th July
Little Bunting	Mansfield-Woodhouse, Nottinghamshire, 19th to 22nd January
	Kelsall, Cheshire, 22nd January
	Severn Beach, Gloucestershire, 12th March
	Staines Reservoirs, Surrey, 18th October

1977

White-billed Diver	Dury Voe, Shetland, 13th June
Black-browed Albatross	Off the Lizard, Cornwall, 12th June
	Burton-on-the-Wolds, Leicestershire, 9th September
American Bittern	Kenmure Holms, Dumfries & Galloway, 16th October to at least 1st November
Lesser White-fronted Goose	Moss Side, Merseyside, 30th December
Ring-necked Duck	Lymington River, Hampshire, 18th December
Saker	Trewey Downs, Cornwall, 19th September
Baillon's Crake	Redcar, Cleveland, 6th September
Baillon's or Little Crake	Westbere, Kent, 15th January
Black-winged Stilt	Over Walsworth, Hertfordshire, four, 12th May
Western Sandpiper	St Kilda, Western Isles, 7th August
	Pegwell Bay, Kent, 17th to 24th September
Broad-billed Sandpiper	Woodstock, Oxfordshire, 30th April
Slender-billed Curlew	Nigg Bay, Highland, 16th October: locality is in Highland not Grampian as stated (<i>Brit. Birds</i> 71: 529)
Lesser Yellowlegs	Leverton, Humberside, 29th August
Terek Sandpiper	Bude, Cornwall, 14th September
Great Black-headed Gull	Sully Island, South Glamorgan, 16th June
	Cresswell Pond, Northumberland, 29th October
Bonaparte's Gull	Musselburgh, Lothian, 1st October
	Pagham Harbour, West Sussex, 5th November
Ross's Gull	Torrisdale Bay, Highland, 9th to 10th July
	Flamborough Head, Humberside, 16th November
Gull-billed Tern	Dungeness, Kent, 30th April
White-winged Black Tern	Walberswick, Suffolk, 25th June
Alpine Swift	Durness, Highland, 4th July
Richard's Pipit	Landguard Common, Suffolk, 21st August
Siberian Stonechat	Stronsay, Orkney, 8th October
	Birling Gap, East Sussex, 9th October

Savi's Warbler	Happisburgh, Norfolk, 26th April Cley, Norfolk, 5th May Alkborough, Humberside, 7th May Lindisfarne, Northumberland, 1st June Saltfleetby, Lincolnshire, 25th September
Olivaceous Warbler	Landguard Point, Suffolk, 21st August
Lesser Grey Shrike	Ramsgate, Kent, 23rd September
Nutcracker	Torquay, Devon, 2nd October West Tytherby, Wiltshire, three, 14th to 15th October
Serin	New Romney, Kent, 26th August
Rustic Bunting	Brancaster, Norfolk, 2nd June
Little Bunting	Blakeney Point, Norfolk, 3rd September Frodsham, Cheshire, 16th October Royston, Hertfordshire, 13th November

1976

Black-browed Albatross	Salthouse, Norfolk, 21st October
Sooty Albatross	Sandwich Bay, Kent, 2nd October
Red-footed Falcon	Amwell, Hertfordshire, 9th September: previously accepted (<i>Brit. Birds</i> 70: 419)
Lesser Golden Plover	Caerlaverock, Dumfries & Galloway, 31st October
Great Snipe	Quarley, Hampshire, 3rd February to March Leighton Lock, Humberside, 28th August
Dowitcher sp.	Gillingham, Kent, 6th October
Long-tailed Skua	Foula, Shetland, 28th May Fairburn Ings, North/West Yorkshire, 19th December
Great Black-headed Gull	Seacombe, Merseyside, 1st September Keyhaven Marsh, Hampshire, 30th October
Red-rumped Swallow	Llyn Tegid, Gwynedd, 14th September
Red-throated Pipit	Blakeney Point, Norfolk, 28th August

1975

Great Snipe	Cowpen Marsh, Cleveland, 1st June
Lesser Grey Shrike	Grafham Water, Cambridgeshire, 6th November

1974

Saker	Trewey Downs, Cornwall, 4th and 26th October
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1973

Short-toed Treecreeper	Hadleigh, Essex, 18th December
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1972

Pallas's Sandgrouse	Glen Clova, Highland, 11th April
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1971

Black-browed Albatross	Portland, Dorset, 10th August
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Appendix 3. Supplementary records: species and years

To assist researchers, species for which supplementary records for previous years are included in the main body of this report are listed here, with the years involved.

White-billed Diver 1975. Cory's Shearwater 1977. American Bittern 1977. Little Bittern 1976. Little Egret 1977. Purple Heron 1968 1970 1977. Black Stork 1977. White Stork 1976 1977. Glossy Ibis 1976 1977. Lesser White-fronted Goose 1977. Black Brant 1975 1976 1977. American Wigeon 1966 1967 1974 1977. Green-winged Teal 1977. Blue-winged Teal 1973. Ring-necked Duck 1976 1977. King Eider 1969 1975 1976 1977. Black Kite 1976. American Kestrel 1976. Red-footed Falcon 1976. Eleonora's Falcon 1977. Gyrfalcon 1977. Baillon's Crake 1976. Crane 1977. Collared Pratincole 1977. Pratincole sp. 1977. Lesser Golden Plover 1975 1976. Sociable Plover 1968 1976 1977. White-rumped Sandpiper 1972 1973 1977.

Broad-billed Sandpiper 1976. Buff-breasted Sandpiper 1977. Long-billed Dowitcher 1975 1977. Spotted Sandpiper 1977. Wilson's Phalarope 1976. Long-tailed Skua 1976 1977. Mediterranean Gull 1958. Laughing Gull 1968 1977. Franklin's Gull 1977. Ring-billed Gull 1977. Ross's Gull 1977. Caspian Tern 1977. Bridled Tern 1977. White-winged Black Tern 1977. Brünnich's Guillemot 1977. Snowy Owl 1977. Roller 1977. Short-toed Lark 1977. Red-rumped Swallow 1977. Richard's Pipit 1967 1968 1970 1976 1977. Tawny Pipit 1977. Red-throated Pipit 1977. Citrine Wagtail 1977. Siberian Rubythroat 1977. Siberian Stonechat 1977. Isabelline Wheatear 1977. Black-throated Thrush 1977. Cetti's Warbler 1976. Pallas's Grasshopper Warbler 1976. Savi's Warbler 1977. Aquatic Warbler 1972 1975 1977. Subalpine Warbler 1977. Rüppell's Warbler 1977. Greenish Warbler 1977. Northern Willow Tit 1975. Wallcreeper 1977. Penduline Tit 1977. Isabelline Shrike 1976 1977. Lesser Grey Shrike 1977. Woodchat Shrike 1976 1977. Nutcracker 1977. Rose-coloured Starling 1975 1977. Serin 1968 1977. Arctic Redpoll 1973. Scarlet Rosefinch 1974 1977. Cape May Warbler 1977. White-crowned Sparrow 1977. Rustic Bunting 1976. Yellow-breasted Bunting 1977. Pallas's Reed Bunting 1976. Black-headed Bunting 1977. Blue Rock Thrush 1977. Painted Bunting 1974.

Mystery photographs

35 Waders are tremendous migrants, so vagrants from virtually anywhere in the northern hemisphere could occur in western Europe. Fortunately, they are fairly large and conspicuous and, with a little patience, can be watched at close quarters, so identification problems can usually be resolved by a systematic consideration of relatively few features.



Two points immediately strike one about the wader photographed by J. D. Bakewell in Suffolk in spring 1978 (plate 212, repeated here at reduced size). First, the medium-length straight bill, fairly small head, relatively dark upperparts and fairly long legs show that it is one of the smaller *Tringa* sandpipers; although superficially some aspects are reminiscent of a summer-plumaged female Ruff *Philomachus pugnax*, that species can be eliminated by the straight bill, lack of bold brown blotches on the lower breast and lack of the characteristic pot-bellied stance. Secondly, the bold and irregular whitish blotches on the mantle and the dark breast streaking show that it is in summer plumage.

There are only a few species within the genus *Tringa* which could be confused here. The size and brightness of the pale mantle spots of the summer plumage narrows the problem to just two: Wood Sandpiper *T. glareola* and Lesser Yellowlegs *T. flavipes*. Both other possibilities—the larger Green Sandpiper *T. ochropus* and the similarly proportioned Solitary Sandpiper *T. solitaria*—are predominantly dark, with very small pale spots, even in summer plumage.

The general shape points to the correct decision: Wood Sandpiper. This species has a moderately short and relatively stout bill, which—like the



231. Juvenile Wood Sandpiper *Tringa glareola*, Cornwall, October 1974 (J. B. & S. Bottomley)

232. Mystery photograph 36. Identify the species. Answer next month



tibio-tarsus—appears to be in proportion to the rest of the bird. In contrast, the Lesser Yellowlegs is much more elongated, with a longish fine bill, small head, long neck and very long legs. If still in doubt, plumage characters can help too. Wood Sandpipers tend to have fairly faint spotting on the lower breast and a darkish crown. The mantle plumage of the two species is fairly similar, but the upperparts of the Wood Sandpiper appear much more contrasting, owing to its blackish-brown wing-coverts, those of the Lesser Yellowlegs being noticeably paler and greyer. Of course, in life, the large size and brilliant yellow legs of the latter species aid identification, although beware the small minority of yellowish-legged Wood Sandpipers.

In Britain and Ireland, far more Wood Sandpipers are seen in autumn than in spring; a typical juvenile with strongly buff-spotted upperparts and mottled breast is illustrated for comparison (plate 231); again, the proportions are indicative of the species.

A. J. PRATER

Notes

Mallard trapped by vegetation In August 1975, my husband and I were walking between the River Bain and Horncastle Canal near Kirkby-on-Bain, Lincolnshire, when our attention was drawn by a dog swimming into the canal after a Mallard *Anas platyrhynchos* in moult. The latter, despite attempts to do so, was unable to fly or swim away from the dog. We waded into the water and found that one of the duck's legs was anchored to the canal bed by a thick rope of twisted strands of water-crowfoot *Ranunculus*. When we untangled these, the Mallard swam away.

STEPHANIE J. TYLER

Yew Tree Cottage, Lone Lane, Penallt, Monmouth, Gwent

Male Garganey with duck and brood On 31st May 1957, at Alvecote Pools, Warwickshire, I saw a drake and duck Garganey *Anas querquedula* swimming together in charge of 12 small ducklings. *The Handbook, BWP* and D. A. Bannerman (1958, *The Birds of the British Isles*, vol. 7) all state that the drake Garganey takes no part in tending the young.

J. LORD

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There is no evidence in this case that the drake was in fact tending the young, or that it was even the mate of the duck. If the drake was still in breeding condition, it might even have been attracted to the duck: drake Mallards *A. platyrhynchos* have been seen to rape duck Mallards accompanying broods. EDS.

Regular diving by Shovelers in shallow water It is well known that surface-feeding ducks, including Shovelers *Anas clypeata*, will occasionally dive for food, but the following illustrates that sometimes this behaviour can occur for a regular period. On 15th September 1976, at Cheddar



Reservoir, Somerset, I observed four Shovelers diving for food; subsequently, up to three did so on five other days up to 25th, observations being made for half an hour or less each day. This behaviour was not, however, continued. The low water level may have been a factor in providing a temporary food supply which this small population exploited. The average length of each dive was seven seconds, and just before submerging the ducks partially opened their wings, an action very like that of an Eider *Somateria mollissima*.

BRIAN RABBITTS

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Captive Shovelers at the Wildfowl Trust, Slimbridge, regularly exploit supply of grain by diving, this behaviour sometimes becoming habitual for periods of months. EDS

Large gathering of Cuckoos At about 12.00 GMT on 11th May 1971, at Woodfidley, New Forest, Hampshire, I heard a loud chorus emanating from the edge of mixed woodland. As I approached to investigate, I suddenly realised that the trees were alive with Cuckoos *Cuculus canorus*. They seemed all to be calling and the strange noise, previously unknown to me, was being produced by many individuals uttering all sorts of variants of the familiar 'cuckoo' as well as other calls, including a fast, deep one equivalent to the 'kwow-wow-wow' mentioned in *The Handbook*. As they were constantly moving from tree to tree an accurate count was not possible, but I estimated no fewer than 50 Cuckoos within an area of about 20 m × 30 m. *The Handbook* states that the species is found 'usually singly except during pairing season. Also ordinarily singly on migration', although T. A. Coward (1958, *The Birds of the British Isles and their Eggs*, series 1, seventh edition) mentioned eight being seen in one small group of bushes, and flocks of up to 14 singing males have been recorded on Cape Clear Island, Co. Cork (1973, *The Natural History of Cape Clear Island*). I have been unable to find any reference to large flocks of Cuckoos occurring at any season.

D. A. CHRISTIE

119 Thornhill Park Road, Thornhill, Southampton, Hampshire SO26AT

Tawny Owl taking juvenile Sand Martin in flight On the evening of 14th July 1956, at Walshford Bridge, 5 km east of Knaresborough, North Yorkshire, the late J. A. S. Borrett and I were catching Sand Martins *Riparia riparia* as part of an extensive ringing programme at breeding colonies. After having been ringed, the martins were released, whereupon they returned to the colony and re-entered the holes to roost. At dusk, one juvenile was released which flew to a height of about 10 m and briefly hovered as if to find its bearings (several juveniles did this before flying off); as it was momentarily stationary in the air, a Tawny Owl *Strix aluco* flew out from a group of trees and took the martin cleanly in its claws. *The Handbook* and D. A. Bannerman (1955, *The Birds of the British Isles*, vol. 4) gave no records of Tawny Owls taking flying prey on the wing.

JOHN R. MATHER

44 Aspin Lane, Knaresborough, North Yorkshire

Dr H. N. Southern has commented that, clearly, some Tawny Owls do hunt in this way, since there are many records of bats (Chiroptera) in the pellets of Tawny Owls, but eye-witness accounts of the owls actually capturing them in flight are rare. EDS

Dark wing-bar of Alpine Accentor The series of recent notes concerning Alpine Accentors *Prunella collaris* (*Brit. Birds* 72: 37-38, 231 and others unpublished) can perhaps be terminated by publication of photographs depicting the distinctive dark bar: see plates 223 and 233. EDS



233. Alpine Accentor *Prunella collaris*, Spain, May 1977 (Colin Slater)

Carrion Crow persistently eating feathers On 12th December 1977, at Chew Valley Lake, Avon, four Carrion Crows *Corvus corone* descended on the fresh corpse of a Black-headed Gull *Larus ridibundus* lying breast upwards on the muddy edge of the lake. The largest crow, keeping the others away, started to tear open the torso, plucking out breast feathers and swallowing them one at a time. When it had swallowed about 50, it consumed a few small fragments of flesh; it then carried a portion about 50 m, where it buried and covered it over. During its absence, the other three crows fed on the carrion, but did not swallow any feathers. This seemed a very time-wasting procedure during competition for the available carrion, even if the feathers had some slight food value.

D. E. LADHAM

Willow Lodge, Chew Stoke, Avon BS18 8YA

Derek Goodwin has commented on the oddity of this behaviour and hazarded a guess that the large crow, for some reason, needed some element present in the feathers. Further observations of a similar nature are welcomed. EDS

Carrion Crow feeding on limpets On 26th May 1977, at Peaked Tor Cove, Torquay, Devon, I observed a pair of Carrion Crows *Corvus corone* feeding on rocks exposed at low tide. One crow prised four or five limpets *Patella* (probably *P. vulgata*) from the rock with its bill and held them individually in its claws to eat the flesh. It appeared to have no difficulty in removing the limpets from the rock, which it did in a matter of seconds, striking the molluscs with a sideways movement of its head. The other crow was not seen to remove limpets, but did pick up unidentified items from the beach.

D. W. GREENSLADE

Sunnyhome, 4 Park Hill Road, Torquay, Devon TQ1 2AL

Fifty years ago . . .

From 'THE BEHAVIOUR OF STARLINGS IN WINTER' by V. C. Wynne-Edwards: 'It is recommended that no steps be taken to destroy Starlings wholesale by poison gas or other efficient means before their local economic status is properly examined . . . Owing to the roosting-habit the bird could be practically exterminated in one season by a concerted attack. The effects would be felt beyond the borders of Devonshire, and might even become the subject of international arbitration! Winter immigrants are not to be considered as altogether British property.' (*Brit. Birds* 23: 153, November 1929)

Announcements

Special book offer for subscribers to 'British Birds' within Britain and Ireland As a service to subscribers, we can offer the following books at special post-free prices, some with substantial discounts. We hope that subscribers will take full advantage of this opportunity. The offer will remain open for a limited period, until a further announcement, while purchased stock lasts. Orders will be dealt with in sequence of receipt. Everyone ordering one or more books will also receive a free copy of *The 'British Birds' List of Birds of the Western Palearctic* (Macmillan, 1978), usual price 65p.

Title, authors, publisher, review details	Publishers' list price	Price (post free) to BB subscribers
<i>Seventy Years of Birdwatching</i> by H. G. Alexander (T. & A. D. Poyser, 1974) (Review: <i>Brit. Birds</i> 67: 245-246).	£4.60	£3.95
<i>Threatened Birds of Europe</i> by Robert Hudson (Macmillan, 1975) (Review: <i>Brit. Birds</i> 68: 517-518).	£4.95	£3.95
<i>Ducks of Britain and Europe</i> by M. A. Ogilvie (T. & A. D. Poyser, 1976) (Review: <i>Brit. Birds</i> 69: 106-107).	£5.00	£4.25
<i>Wildfowl of Europe</i> by Myrfin Owen (Macmillan, 1977) (Review: <i>Brit. Birds</i> 70: 557-558).	£15.00	£9.50
<i>Flight Identification of European Raptors</i> by R. F. Porter, Ian Willis, Steen Christensen and Bent Pors Nielsen (T. & A. D. Poyser, 2nd edition, 2nd impression, 1978) (Review: <i>Brit. Birds</i> 67: 520-521).	£6.00	£5.25
<i>Rare Birds in Britain and Ireland</i> by J. T. R. Sharrock and E. M. Sharrock (T. & A. D. Poyser, 1976) (Review: <i>Brit. Birds</i> 70: 36-38).	£6.00	£5.25
<i>A Sketchbook of Birds</i> by C. F. Tunnicliffe (Gollancz, 1979) (Review: <i>Brit. Birds</i> 72: 498)	£7.95	£7.95

This offer is strictly limited to subscribers to *British Birds* within the UK and the Republic of Ireland. Orders, with accompanying cheque made payable to Macmillan Journals Limited, should be sent to 'British Birds' Book Offer, Macmillan Journals Limited, Brunel Road, Basingstoke, Hampshire RG21 2XS. Payment can also be made by Barclaycard or Access: supply your number with your signed order.

Reduced subscription rates The reduced subscription rates for the members of certain clubs and societies (listed in the September issue) will increase from the end of this month. Price rises are unfortunately inevitable these days and we hope that subscribers will understand and remain loyal to the journal. It is only by maintaining—or preferably increasing—the number of subscribers that we can hold the rates as low as they are and at the same time retain or improve the journal's standards.

	Up to 30th November 1979	From 1st December 1979
Standard subscription	£12.00	£12.00
Young Ornithologists' Club	£6.50	£6.50
New subscribers (RSPB members only)	£6.50	£8.50
Members of participating bird clubs and societies (<i>Brit. Birds</i> 72: 439-440)	£7.50	£8.50
USA and Canada (surface mail)	\$19.50	\$19.50
USA and Canada (airmail)	\$45.00	\$45.00
Rest of world (surface mail)	£12.00	£12.00
Rest of world (airmail)	£19.00	£19.00



Past winners of the competition have been Michael C. Wilkes (1976), Peter Lowes (1977) and Dr E. C. Fellowes (1978). Their prizes (cheques for £100 and engraved salvers) were presented at press receptions in London by Sir Peter Scott, Mrs Joyce Grenfell and Bill

Oddie. The 1979 award will be marked by a similar ceremony, with the presentation made by a well-known personality.

The closing date for submission of entries for the fourth of these annual awards is 31st January 1980. Up to three colour transparencies, each taken during 1979, may be submitted by each photographer. They will be judged on interest and originality, as well as technical excellence. Preference will be given to photographs taken in Britain or Ireland, but those of species on the British and Irish list taken elsewhere are also eligible. A brief account (not more than 200 words) should be enclosed with each, giving the circumstances in which obtained, the method used, technical details (focal length of lens and make of camera and film), locality, date and photographer's name and address. Transparencies will be returned only if accompanied by a suitable stamped and addressed envelope.

Transparencies should be clearly marked 'Bird Photograph of the Year' and sent to the editorial office at Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

XVIII International Ornithological Congress

The congress will be held in the Moscow State University, USSR, from 16th-25th August 1982. There will be post-congress and possibly pre-congress trips to Lake Baikal, Central Asia, the Caucasus and so on. The president is Professor Lars von Haartman; the secretary-general is Professor Valery Ilyichev. Potential participants can obtain details in the 'First announcement' by writing to the organising committee of the congress at the Ringing Centre, Fersman Street 13, Moscow 117312, USSR.



Free car-stickers There are just a few hundred of the *British Birds* car-stickers still available (see Announcement, 72: 393). Subscribers can obtain one by sending a stamped self-addressed envelope to 'British Birds' Car Sticker Free Offer, c/o Annabel Hartog, Macmillan Journals Ltd, 4 Little Essex Street, London WC2R 3LF.

Requests

Lead-poisoning of waterfowl It is known that lead-poisoning is a problem in certain areas, but there is no available information on its extent or seriousness in Britain as a whole. This is currently being investigated in a research project set up by the RSPB, the Wildfowlers' Association of Great Britain and Ireland, and the Wildfowl Trust. One method will be to examine a large number of waterfowl guts from different parts of the country. Most samples will probably be provided by wildfowlers, but any dead waterfowl (ducks, geese and swans (Anatidae), Moorhens *Gallinula chloropus* and Coots *Fulica atra*)—for example from an outbreak of botulism, an oiling disaster, or simply found dead—would be useful sources of information.

Whole frozen corpses, or preferably extracted guts, are required. The guts should be preserved in 10% formaldehyde (available from chemists) in a polythene bag. The bag should be clearly labelled with: species, sex, weight of whole bird, date, locality, and habitat in which found. Should bulk be a problem, then the gizzard and liver alone would suffice. The material can be taken to a local collection centre.

For further details, notification of bird kills, and for collection arrangements, please contact: Dr Greg P. Mudge, Research Department, The Wildfowl Trust, Slimbridge, Gloucestershire GL2 7BT; or phone Cambridge (Glos.) 333 (STD code 045 389), extension 42 (office hours only).

Mediterranean Gulls in Britain and Ireland All records of Mediterranean Gulls *Larus melanocephalus* in Britain and Ireland during 1968-77 are being collated and analysed for a new paper comparing the pattern in this 10-year period with that in 1958-67 (*Brit. Birds* 65: 187-192). Details of locality, date and age of bird are required for any records not already published in a county or regional bird report. Records, which will be acknowledged in the paper, should be sent to D. J. Britton; 44 Kirkleatham Avenue, Marske, Cleveland.

News and comment

Peter Conder and Mike Everett

Ban on hunting in Jordan In August 1979, a cabinet decision of the Hashemite Kingdom of Jordan banned the hunting of *all* species of animals except fish for a period of five years, after which the situation will be reviewed. The Ministry of Commerce has been instructed to cease issuing import licences for any items of hunting equipment, and all hunting licences have been revoked.

Controls on hunting in Jordan, either by limiting the bags of different species or by restricting hunting in increasingly large parts of the country, have been extended over the

past few years. And not before time, we might say, when modern guns, linked with improved desert-going vehicles as well as improved roads, have reduced various species of deer and antelope to negligible numbers.

Government grants to conservation and to the arts George Medley, Director of the World Wildlife Fund (UK), comments, in the summer issue of *World Wildlife News*, on the inequalities of grants given to Research and Arts Councils. It is an

old complaint, but still relevant: the Government does not pay out sufficient money for the protection and conservation of Britain's natural heritage. George Medley points out that the Government increased the Nature Conservancy Council grant for the year ending April 1979 to £8 million to allow them to expand. In the following year, however, the grant for the total operating costs of the NCC has been cut back to £6.9 million, but the grant to the Arts Council has been increased by £12 million to £61 million. It is odd, is it not, that man values more highly his own puny efforts at creation and largely ignores or destroys works of nature that are beyond his powers to recreate?

Bird observatory studies The Science Research Council has agreed to fund an examination of the migration data collected by bird observatories by the provision of an SRC Care studentship for a statistician with an ornithological background, or *vice versa*, to examine ways of using daily counts and ringing totals of birds recorded at British bird observatories as a means of monitoring populations. This development is good news, since many observatories have quantities of unworked data, the accumulation of which may have discouraged recent workers from collecting information as assiduously as did the pioneers.

Fishing line project The Young Ornithologists' Club has just published the results of a nine-month survey (16th June 1978 to 16th March 1979) into the deaths of birds caused by nylon fishing line or from lead poisoning originating from 'split' lead shot used by anglers. A total of 188 reports was received from over 300 children and dozens of adults. Over 9 km of nylon line was recovered from freshwater sites and 0.9 km from coastal sites; 3,110 pieces of split lead shot were found at freshwater sites, but only two from coastal; in the same areas, 329 and 20 hooks were recovered. There was an average of 153 m of line, 53 pieces of split lead shot and four hooks for every kilometre of bank searched. Birds found dead or injured totalled 42 of 17 species. The YOC's special report on the survey is available from the YOC, The Lodge, Sandy, Bedfordshire SG19 2DL.

Migration 'phone-in' The results of the 'phone-in', during which YOC members and others were invited to give details of migrants arriving in spring 1979, are also available from

the YOC at Sandy, cost 40p (including postage).

Richard Richardson Appeal Liz Forster tells us that much of the money collected in the Richard Richardson Appeal has been spent constructing a new scrape at the edge of the Cley marsh and a hide overlooking it. The inscription on the hide reads, 'This hide and scrape in memory of Richard Richardson, artist and ornithologist, was given by the many friends with whom he shared his great knowledge of birds'. The hide was officially opened on 25th August 1979 by Michael Seago, a very appropriate person to do the job. The remaining funds now form part of the Richard Richardson Award Fund (*Brit. Birds* 72: 46, 441).

Modifications to telescopes and binoculars for close observation Owners of Optolyth 30 × 75 telescopes will be interested to know that Tim Mahm, of Howards Optical Company, Ripley House, Sharrington, Melton Constable, Norfolk NR24 2PH (phone 026 386 286), has developed a special conversion (costing about £5) which enables focusing down to about 12m: a must for really detailed observation. The focal length of Zeiss and Leitz 10 × 40B binoculars can also be considerably reduced, for about £10, obviating that often annoying need to walk backwards to focus on close warblers! (Contributed by P.J. Grant)

Nature Conservancy Council Research Report Digest This 16-page review, the NCC's second such digest, is intended to bring the contracted research reports to the attention of interested bodies such as university departments, research and conservation bodies, local government planning officers and so on. There is no charge for this summary, which gives informative accounts of the main results of the research projects, except when the subject was a survey of a rare species such as the large blue butterfly *Maculinea arion*. Eight of the summarised reports concern birds, chiefly their distribution in Orkney. The reports have been microcopied and are available only in microfiche format (60 frames per fiche, 6 inches by 4 inches, filmed at a reduction of 24). The costs of the microfiches range between £1.25 and £2.25. For further information, write to Information and Library Services, Nature Conservancy Council,

Calthorpe House, Calthorpe Street, Banbury, Oxon OX16 8EX.

Trees and recycled paper In response to the tremendous interest in trees and recycled paper, Conservation Books are launching a tree products range for sale by mail order. This range consists of tree notelets, jigsaw puzzles, posters, paper-making equipment and recycled stationery. For further information, write to Conservation Books, 228 London Road, Reading, Berkshire RG1 6 1AH.

'Parc Naturel Régional de la Corse: les oiseaux' This is a useful 80-page guide for birdwatchers visiting Corsica, edited by J. C. Thibault of the Parc Naturel Régional de la Corse, Palais Lantivy, 20000 Ajaccio, Corsica. It is pocket-sized (245 mm × 115 mm), with many black-and-white photo-

graphs and two plates of colour paintings of bird species which are either rare or no longer breed in the park. In one type, the guide describes the different general features of the park and its avifauna, and in a smaller, blue type it gives more detailed information about some species or even where to find them. No price is quoted.

Loch Lomondside We have been passed a copy of John Mitchell's paper *Bird Recording on Loch Lomondside*, which, although it was not the author's original intention, became a celebration of what was in effect the first national bird report for Scotland by J. H. Harvie Brown in 1879. This paper appears in the *Loch Lomond Bird Report*, No. 7 and contains a very useful summary of the main papers that have described the avifauna of the area in the last hundred years.

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

R. A. Hume and K. Allsopp

These are largely unchecked reports, not authenticated records

This report covers August, with some July and early September records; except where otherwise stated, all dates refer to August. Cyclonic westerly weather predominated during the month, with a series of depressions and associated fronts crossing the country, bringing rain and, on 13th and 14th, gale-force southwesterly winds in the south. Shetland, to the north of the depressions, had southeasterlies to northeasterlies at times. On 18th, a brief spell of easterlies occurred from high pressure over Scandinavia, affecting northeast England and Scotland. An anticyclonic system developed to the west on 26th and drifted eastwards across the country, giving first northerlies and then southeasterlies by 29th.

Seabirds

The first big shearwater was a **Cory's Shearwater** *Calonectris diomedea* off Rathlin Island (Co. Antrim) on 8th; five or six passed Holme (Norfolk) between about 20th and 25th. A **Great Shearwater** *Puffinus gravis* was off Fair Isle (Shetland) on 22nd. **Sooty Shearwaters** *P. griseus* were frequent in Irish waters, with 160 off Annagh Head (Co. Mayo) on 5th and 35 off Rathlin on 13th. Over 20 passed Flamborough Head (Hum-

berside) on 25th, when a few also occurred at Cley (Norfolk). Single **Pomarine Skuas** *Stercorarius pomarinus* passed Filey Brigg (North Yorkshire) on 6th, Coquet Island (Northumberland) on 13th and Cley on 18th and 19th. Two or three **Mediterranean Gulls** *Larus melanocephalus* remained at Sandwich Bay (Kent) from 27th into September. An early **Sabine's Gull** *L. sabini* appeared at

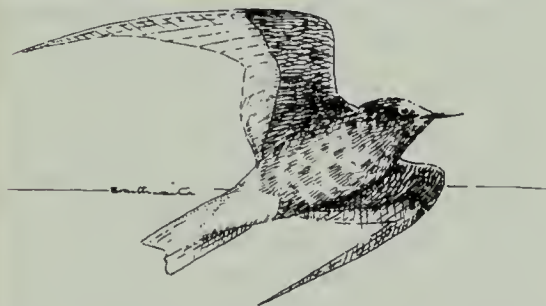


Filey Brigg on 8th, while the **Bonaparte's Gull** *L. philadelphia* at Bangor (Co. Down) remained until 12th (see plate 234). Another Bonaparte's was at Lowestoft (Suffolk) on 7th and a third at Birkenhead (Merseyside) on



234. Bonaparte's Gull *Larus philadelphia*, Co. Down, August 1979 (Thomas Ennis)

22nd: a surprising trio. One **Ring-billed Gull** *L. delawarensis* still remained at Belmullet (Co. Mayo) until at least 18th. Theale Gravel-pits (Berkshire) produced a **Caspian Tern** *Sterna caspia* on 12th. Movements of **Black Terns** *Chlidonias niger* were mostly small, but 130 went north and 23 south at Sandwich on 18th (record numbers there) and 100 were at Dungeness (Kent) in the last week of the month. Associated with these, a single **White-winged Black Tern** *C.*



leucopterus was at Dungeness on 22nd, followed by three on 25th. Singles occurred at Shellness, Sheppey (Kent), on 18th, Theale Gravel-pits on 27th, Ditchford Gravel-pits (Northamptonshire) about 28th and on Tees-side (Cleveland) on 4th September.

Herons and waterfowl

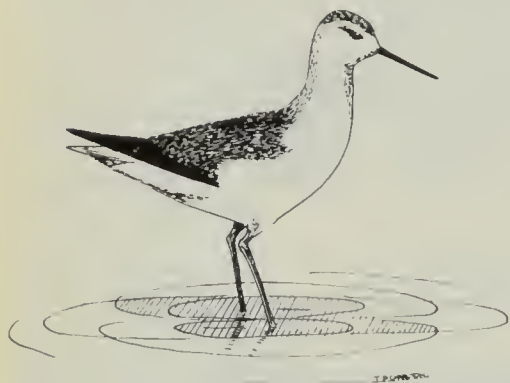
The **Great White Egret** *Egretta alba*, earlier

recorded in South Humberside, was watched at Hickling Broad (Norfolk) from 9th to 14th, and probably this bird was at Ranworth (Norfolk) on 31st, although an albino Grey Heron *Ardea cinerea* may have caused some confusion. **Purple Herons** *A. purpurea* were found at Filey Brigg in the first week and at Breydon Water (Norfolk) on 14th. An unseasonal **Smew** *Mergus albellus* remained at Benacre (Suffolk) for most of the month and two eclipse **Blue-winged Teals** *Anas discors* were discovered in Shetland on 7th September.

Waders

A **Black-winged Stilt** *Himantopus himantopus* was at Saltash (Cornwall) for two weeks up to 25th. Less exotic, two **Kentish Plovers** *Charadrius alexandrinus* stayed at Cliffe (Kent) from mid-month into September and singles appeared at Sandwich on 19th and near Skegness (Lincolnshire) on 29th. A **Dotterel** *C. morinellus* near Weston-super-Mare (Avon) on 26th was followed by another at Blakeney (Norfolk) on 31st and 1st September. American waders turned up in the form of **Pectoral Sandpipers** *C. melanotos* at Dungeness in July, Chew Valley Lake (Avon)—two in late August—and at Hanningfield (Essex) and in Shetland early in

September. A **Solitary Sandpiper** *Tringa solitaria* was reported at Perry Oaks Sewage-farm (London) at the beginning of the



month and a **Wilson's Phalarope** *Phalaropus tricolor* stayed at Ballycotton (Co. Cork) from 31st July until mid-month. Two more were at Dungeness on 27th, one at Sidlesham (West Sussex) on 28th and two on Tees-side from 31st into September, making a good crop for the month. **Red-necked Phalaropes** *P. lobatus* turned up at Snettisham (Norfolk) on 4th, Durlough (Somerset) on 16th and 17th, at Cley on several dates from 19th into September and at Cliffe on 19th. The latter two localities were especially productive in August and both had single **Marsh Sandpipers** *T. stagnatilis*, from 14th to 19th and from 20th to 25th respectively, as their star bird.

Raptors and near-passerines

Few unusual birds of prey were reported. **Hobbies** *Falco subbuteo* were fairly widespread, with one on Rathlin Island on 15th: an unexpected record for Ireland. A female **Montagu's Harrier** *Circus pygargus* was at Cliffe on 22nd, followed by an adult male on 25th. A **Red Kite** *Milvus milvus* was reported from Lorton (Cumbria) between 26th and 31st. A **Corncrake** *Crex crex* was found at Winterset Reservoir (West Yorkshire) on 10th. Some spectacular colour was brought to Hampshire by a **Bee-eater** *Merops apiaster* at Winchester on 19th. Single **Hoopoes** *Upupa epops* were at Sizewell (Suffolk) from 21st to 25th and at Sandwich Bay on 29th. **Wrynecks** *Jynx torquilla* began to appear in small numbers on the East Anglian coast from north Norfolk to Minsmere from 25th and one was found at Portland Bill (Dorset) on 27th.

Passerine migrants

There was a **Woodchat Shrike** *Lanius senator* at Portland on 10th and 11th, and a **Lesser**

Grey Shrike *L. minor* remained at Ringstead (Norfolk) from late July right through August. Migrant **Red-backed Shrikes** *L. collurio* appeared at coastal sites in Norfolk and at Minsmere and Sizewell in Suffolk from 23rd onwards, and Sandwich Bay had one on 22nd, two on 27th and one until 29th.

Pied Flycatchers *Ficedula hypoleuca* reached a peak at Sandwich rather earlier, with at least 41 on 19th; passage in north Norfolk was most pronounced from 25th. On that day, there were 60 **Whinchats** *Saxicola rubetra* and 55 **Wheatears** *Oenanthe oenanthe* at Sandwich; Whinchats then reached 91 on 30th and Wheatears 116 on 26th. A **Tawny Pipit** *Anthus campestris* stayed at Sizewell from 21st to 26th. **Short-toed Larks** *Calandrella brachydactyla* were on Fair Isle from 9th into mid September, and one was found at Porthgwarra (Cornwall) on about 12th. A good selection of migrant warblers included a scattering of **Aquatic Warblers** *Acrocephalus paludicola* as far west as Kenfig (Mid Glamorgan), Frampton Pools (Gloucester) and Marazion (Cornwall) where there were three in late August; Fair Isle also had three on 18th (one staying until 20th). **Icterine Warblers** *Hippolais icterina* occurred in small numbers on Fair Isle, at Holkham (Norfolk) from 24th onwards into September, Stiffkey (Norfolk) on 19th and at Portland where there were two in late August. As usual, however, Portland had more **Melodious Warblers** *H. polyglotta* and, after one on 12th, up to six were present throughout the last week of the month. Another occurred at Beachy Head (East Sussex) on 26th. **Barred Warblers** *Sylvia nisoria* appeared as expected along the north Norfolk coast from 23rd onwards, with up to three at Holkham and two at Cley. Fair Isle had good numbers, reaching a peak of seven late in the month. A much earlier record worth mentioning here was totally unexpected and quite exceptional: a Barred Warbler trapped at Brandon (Warwickshire) in May. Only one **Greenish Warbler** *Phylloscopus trochiloides* was reported, however, with none found on the north Norfolk coast despite much searching; Fair Isle had the only one, on 19th. An **Arctic Warbler** *P. borealis* turned up on Whalsay (Shetland) about 1st September. A **Rose-coloured Starling** *Sturnus roseus* on Out Skerries (Shetland) on 19th was just one of about four which were in Shetland about that time. **Scarlet Rosefinches** *Carpodacus erythrinus* are to be expected on Fair Isle and singles occurred there from 17th to 22nd and from 26th until mid September. A **Black-**

headed Bunting *Emberiza melanocephala* was on the same island on 10th, and a **Yellow-breasted Bunting** *E. aureola* appeared at Fife Ness (Fife) later in the month. Also late in the month, an **Ortolan Bunting** *E. hortulana* was found on Tees-side. Finally, **Crossbills** *Loxia curvirostra* made no very obvious showing: 45 in late July in the Wyre Forest (Hereford & Worcester), gathered on oaks to feed on caterpillars, were probably locally established birds, but a handful appeared to entertain those visitors alert enough to notice

them in the grounds of The Lodge at Sandy (Bedfordshire) in mid August, remaining into September.

Latest news

In mid October: **Blyth's Reed Warblers** *Acrocephalus dumetorum*, St Agnes (Scilly), Weybourne (Norfolk) and Orkney; **Sub-alpine Warbler** *Sylvia cantillans* and **Rose-breasted Grosbeak** *Phaeotecticus ludovicianus*, St Mary's (Scilly); **Red-throated Pipits** *Anthus cervinus*, Portland and Theale Gravel-pits.

Reviews

First Aid and Care of Wild Birds. Edited by J. E. Cooper and J. T. Eley. David & Charles, Newton Abbot, 1979. 288 pages; 23 black-and-white photographs; 46 figures. £9.50.

There has long been a need for a book such as this. The care of sick and injured birds is a subject shrouded in ignorance, even for many vets, and this book should do much to clear away misconceptions. All the contributors are well qualified, including several veterinary surgeons, though, as with any editorial compilation, there is an uneven approach and some chapters are better than others.

The subject is treated seriously—indeed scientifically—as it must be, but there is nothing that is not readily comprehensible to the interested layman. Much of the material is ostensibly directed at the wild-bird hospital, the aim wherever possible being the rehabilitation of the injured bird to the wild, although in practice the facilities required will mean that many incapacitated birds are better humanely destroyed—on which technique there is a chapter—but the optimistic approach is encouraging. It is, however, questionable whether—as is stated—saving injured birds will help the population, except in the cases of a few rare species.

As well as the expected chapters on diseases, injuries, poisons, oil pollution and parasites, topics as diverse as legal aspects, bird behaviour, captive breeding, cage and aviary design, and feeding are covered. Moreover, detailed references are given for each chapter, enabling the interested reader to delve deeper. Three groups of birds which account for a large proportion of those picked up sick or injured get a chapter to themselves: birds of prey including owls, waterbirds, and crows. That on crows has a superfluous section describing the British species, and it is to be hoped that the frequent references in this chapter to the desirability of crows as pets do not lead to large numbers being taken by children, only to be abandoned when the novelty wears off. Seven appendices include lists of recommended equipment and medicines, drugs and dosages, and names and addresses of suppliers. I found the index comprehensive, and cross references between chapters made for ease of use.

The point is repeatedly made that little is known about many aspects of bird biology and much can be contributed by the amateur with birds in his care, for example on moult in captivity, nutrient requirements, or the role of stress in wild birds; and, of course, advances in physiological and clinical knowledge are open to veterinary surgeons. It is to be hoped and expected that this book will improve standards of care and treatment in wild-bird hospitals, as well as by the individual suddenly landed with an incapacitated bird; and it will surely become standard reading for vets.

At £9.50, the price may deter many. It is essentially a book of reference to be dipped into when needed, but should be available to anyone who has ever kept a wild bird. IAN DAWSON

The Coot and the Moorhen. By Jon Fjeldsø. Biological Monographs, av-media, Copenhagen, Denmark 1975, English edition 1977. 56-page booklet; 24 colour slides; tape cassette; 9 work-sheets (all in stoutly boxed ring-binder). £16.50. Booklet available separately £2.50. (Distributed in

UK by Book Marketing Consultants, 43 The High Street, Tunbridge Wells, Kent TN11 1XU)

The booklet covers the description and physical adaptations of the Coot and the Moorhen, their distribution in northern Europe, food, social and reproductive behaviour and subsequent parental care. It is skillfully illustrated, with many excellent line-drawings in the text, showing behavioural postures and other points, together with monochrome versions of the colour slides used in the audio-visual material.

The main thesis of the text relates to the Coot, which the author has personally studied in some depth, whereas the Moorhen tends to be treated in a rather more cursory manner. Although generally written in an easily read style, there are some instances where the translation has suffered, for example 'reed forest' which presumably should have read 'reed bed'. In addition, there is much clumsy hyphenating of words, at the end of printed lines, often not even following the correct syllable patterns: a facet which readers are likely to find particularly irritating.

On the technical side, there is an unfortunate tendency towards anthropomorphic phrasing of the behavioural descriptions; but even more annoying is the number of dubious or unsubstantiated statements that appear, for example: 'If reproduction was successful the year before, this encourages the female to lay a large number of eggs'; or gross errors, such as the unusual colour markings (for a rail) of the African Nkulengu Rail chick making it 'well camouflaged in the grass', when its normal habitat is generally accepted to be deep forest.

While the booklet may be studied separately, there is no information on the slides apart from the number and it would be almost essential to use the cassette tape with them. The reproduction quality of both is generally adequate, although the slides are slightly blurred, possibly as a result of mass production. The cassette summarises much the same material covered by the booklet, but not without additional errors: the Moorhen is described as having two white bands under its neck; and the water louse *Asellus* is not the same creature as a 'Water Cricket' (*Velia*, *Microvelia* and *Mesovelia*); another minor blemish is in a diagram of a food web: a 'right' is given as a 'left'.

Five, well illustrated worksheets ask questions relating both to the booklet and the AV material, and are intended primarily for use by pupils where teachers need to know how much of the material, and the concepts introduced, has been comprehended.

While attractively produced on good quality materials, and possibly filling an open niche (together with other forthcoming titles in the Biological Monograph series), the high price does not seem justified even by today's standard of escalating prices. NICHOLAS WOOD

Endangered Birds. Edited by Stanley Temple. University of Wisconsin Press; Croom Helm Ltd, 1978. 466 pages; 31 black-and-white plates; line-drawings and figures. £8.95.

In the last 20 years or so, a new group of professionals has emerged: the endangered-species biologists. Many of them met in Wisconsin in 1978 for a symposium to discuss management techniques for preserving threatened birds, and the 51 papers in this volume discuss progress and problems under five main headings—improving nest-sites, reducing competition and predation, artificial feeding, fostering and cross-fostering, and captive breeding, with further papers on genetic aspects and the prospects of integrated approaches.

Most of the papers are not light reading, but they convey a heartening impression of painstaking, dedicated work, often under great difficulties. Much has already been learned and some triumphs recorded (e.g. the provision of nest-sites for the Bermuda Petrel or the winter feeding of cranes in Japan), but often the outcome is still in doubt, and in some cases, such as the California Condor, extinction threatens despite years of intensive and costly research. Captive breeding is advancing rapidly, but, as Richard Fyfe points out, so far there does not seem to be a single example of a self-sustaining wild population resulting from the re-introduction of an endangered bird into its original habitat. Ian Nisbet, in his concluding remarks, recognises the development of many successful management techniques for some 40 species of endangered birds, but argues chillingly that in a few decades there may be nearer 4,000 at risk. If he is right, this young profession will have to grow considerably and be prepared to make radical changes in its methods of approach, but they will succeed only if human beings curb their destructive and polluting activities. STANLEY CRAMP

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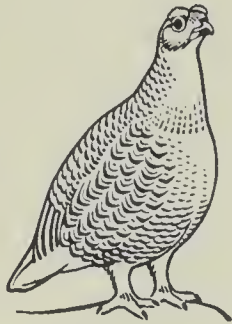
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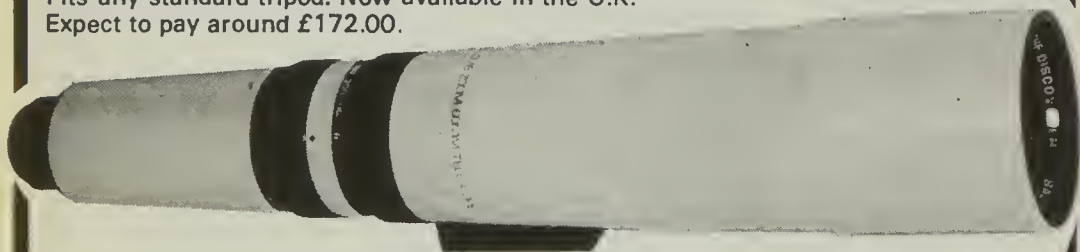
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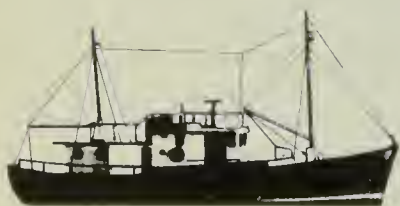
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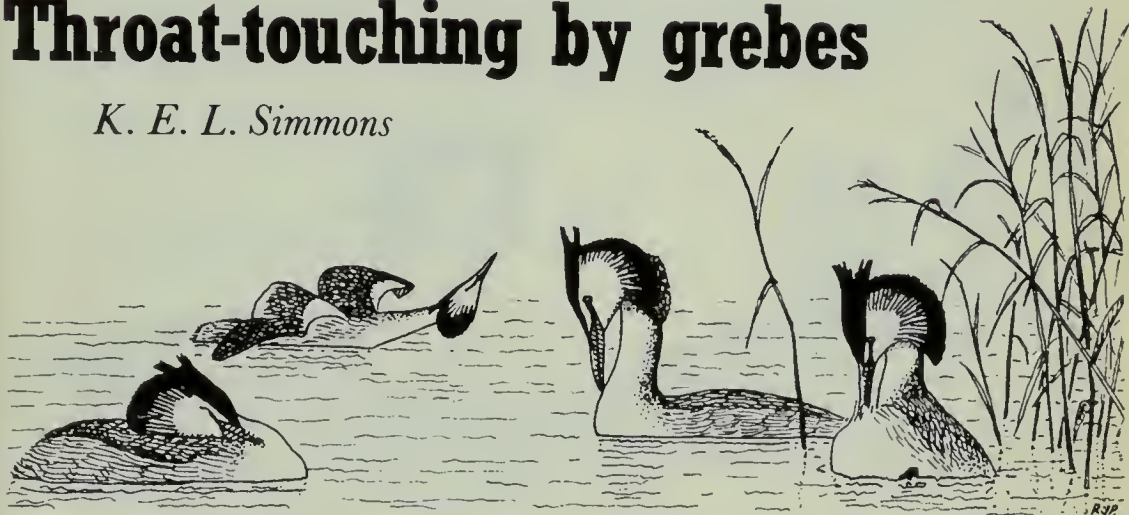
NUMBER 12

DECEMBER 1979



Throat-touching by grebes

K. E. L. Simmons



What is the function of the little-known head movements performed by grebes after diving? Differences in the actions of similar species could aid identification

Prinzinger (1974) described and figured an enigmatic 'breast-looking' movement ('das Vor-die-Brust-Schauen') of the Black-necked Grebe *Podiceps nigricollis*, the function of which he could not determine even though observing it at close range. Shortly after emerging from an underwater dive, individuals of this species were seen to bend the neck slightly backwards and nod the head downwards so that the tip of the bill pointed towards the breast. Similar behaviour by Little Grebes *Tachybaptus ruficollis* was also observed. Although the extent to which the bill actually contacted the breast was not made clear by Prinzinger, the behaviour is clearly related to what I have called 'throat-touching' (Simmons 1964, 1970), suggesting that it drains surplus water from the bill. This behaviour has recently been described in some detail for the Great Crested Grebe *P. cristatus* (Simmons 1977); although the grebes (Podicipedidae) have been increasingly studied in recent years, I know of no other references to throat-touching in the ornithological literature, though I have myself seen the same or equivalent actions performed by Pied-billed Grebe *Podilymbus podiceps*, Little Grebe, Black-necked Grebe, Slavonian Grebe *Podiceps auritus*, Red-necked Grebe *P. grisegena* and, on film, Western Grebe *Aechmophorus occidentalis*. A summary of these observations follows below for each species.

Great Crested Grebe *Podiceps cristatus*

Throat-touching is a common comfort-movement of both adult and young of this species, but can easily be overlooked because it is done so rapidly: the bird lowers its head to press the bill-tip momentarily on the lower part of the foreneck (see fig. 1) and then raises the bill again; the whole movement lasts less than a second. Occasionally, the bill does not quite contact the neck, and I call this incomplete movement a 'head-nod'. The Great Crested Grebe throat-touches in a variety of situations but especially after a dive or during pauses in surface-hunting with the head submerged, in both cases more or less immediately after it surfaces or raises its head from the water. The throat-touching often follows—or may be followed by—a lateral head-shake (another comfort-movement). Frame-by-frame analysis of film has confirmed my long-held impression that the throat-touch drains surplus water from the tip of the bill where it has collected in a large droplet. This appears to be the primary function of the behaviour; in certain other circumstances, however, it seems to be merely a response to irritation and other peripheral stimulation on the bill when it is dry (e.g. during preening). For further information on this and other comfort behaviour of the species, see Simmons (1977).



Fig. 1. Great Crested Grebe *Podiceps cristatus* throat-touching, drawn from 16-mm film (24 frames per second), with frame count indicated by figures (R. J. Prytherch)

Little Grebe *Tachybaptus ruficollis*

Throat-touching by this species was not mentioned by Bandorf (1970) in his monograph, but is extremely common, probably more so than in the case of the Great Crested Grebe. I have observed it frequently, together with head-shaking, from both adults and downy young, mainly just after a dive, but also after the eating of tiny fish or the adding of weed to the nest-platform (in which similar circumstances the Great Crested Grebe also throat-touches). The movement is performed even more quickly than by the larger species, with a rapid down press of the bill (see fig. 2) lasting about one-eighth of a second and an almost instant recovery. At least after diving, Little Grebes may sometimes head-nod instead of full throat-touching; or one or two head-nods may follow a full throat-touch. It was this head-nodding, presumably, that Prinzing (1974) described; I must emphasise, however, that—unlike the Black-necked Grebe (see further, below)—the Little Grebe performs full throat-touching far more frequently.



Fig. 2. Little Grebe *Tachybaptus ruficollis* throat-touching, drawn from 16-mm film (21 frames per second), with frame count indicated by figures (R. J. Prytherch)

Pied-billed Grebe *Podilymbus podiceps*

So far as I know, there is no mention of throat-touching by this American species in the literature. Judging, however, from observations on the vagrant at Chew Valley and Blagdon Lakes, Avon, in 1966 and 1968 respectively (Ladhams *et al.* 1967; Simmons 1969), the behaviour is not only very common but more conspicuous than that of any other grebes known

to me. Though performed quite quickly, the throat-touch looks more deliberate and exaggerated: the downward movement on the head develops into a marked bill-tucking action, probably due mainly to the shortness and thickness of the bill, the bird thus briefly pressing the tip of its bill against its foreneck before returning its head to the horizontal position. Throat-touching, with head-shaking, occurs immediately after a dive and during surface-hunting; also, but apparently mainly without head-shaking, during preening, not only when the bill is wet but also when it is dry. As with the Great Crested Grebe, throat-touching was seen when the bird was inactive or just swimming along; and once after a wing-flap, once after eating tiny prey, and once (along with other comfort behaviour) when it appeared to suffer from intense irritation on the bill. As again with the larger species, throat-touching was rare during the main phases of bathing, even intense dive-bathing. In 1968, I listened to over 950 songs of the Pied-billed Grebe and was able to observe the bird calling on a number of occasions as it adopted the characteristic song-posture (described and figured in Ladhams *et al.* 1967) in which the head is often tossed up and lowered close to the water surface. On some occasions, the grebe throat-touched immediately it stopped singing; it may well have sometimes dipped the bill in the water while singing, though I was not absolutely certain that it did. The Great Crested Grebe will throat-touch while threatening in a somewhat similar posture in which the bill definitely is often emersed.

Fig. 3. Pied-billed Grebe *Podilymbus podiceps* throat-touching (R. J. Prytherch)



Western Grebe *Aechmophorus occidentalis*

I have not seen this American species in life, but noted throat-touching, just after they had surfaced from a dive, by birds in a film by Prof. Robert W. Storer at the XIV International Ornithological Congress in Oxford in 1966.

Slavonian Grebe *Podiceps auritus*

Throat-touching was not included among the comfort behaviour described for this species by Woolfenden (1956) and Storer (1969). In Inverness-shire, during June 1966, I observed several individuals and found throat-touching (and head-shaking) to be frequent after dives, when either one or the other movement occurred or, more usually, the sequence head-shake followed by throat-touch (or sometimes the reverse). This was confirmed from a lone bird at Chew Valley Lake in January 1968. It was also seen to throat-touch after eating a tiny fish and once, following a brief spell of dive-hunting, it throat-touched twice, 'dip-shook' a few times (i.e. dipped the bill in the water and head-shook), and then preened with some further throat-touching and frequent head-shaking. On another occasion, while surface-hunting, it head-shook and preened laterally after raising the head from below the water.

Fig. 4. Slavonian Grebe *Podiceps auritus* throat-touching (R. J. Prytherch)



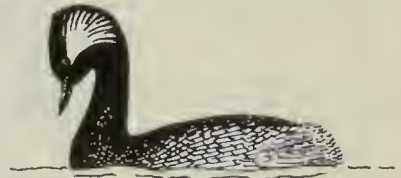
Black-necked Grebe *Podiceps nigricollis*

This is the first of two species which differ significantly from those described so far in this paper. My close-quarter observations on the Black-necked Grebe were limited to three separate individuals at Chew Valley and Blagdon Lakes in 1966 and 1968. On checking the first bird, I was immediately puzzled: it was clear that lateral head-shaking was the typical comfort-movement after a dive, and no full throat-touching was seen. The grebe did, however, perform infrequent nodding-type movements of the head, lowering the bill sharply so it pointed vertically downwards. The second individual behaved similarly: it usually head-

shook after surfacing (or surface-hunting), quite often following this with a jerky movement resembling a head-nod, sometimes right into the water—after which it head-shook again; at times, it also immediately preened dorsally near the shoulder or elsewhere after emerging from its dive. After dozens of dives, it may perhaps have throat-touched more fully only two or three times. On one date, I was able to compare the behaviour of the second bird with that of the vagrant Pied-billed Grebe: the Black-necked performed fewer post-diving comfort-movements of any sort, and then chiefly head-shakes with occasional abrupt head-nods. The third bird of this species usually just head-shook after repeated dives; it appeared to throat-touch just once.

The down-nodding movement of the Black-necked Grebe—evidently the 'breast-looking' of Prinzing (1974)—seems to be somewhat more deliberate and stereotyped than the similar head-nodding of some of the other species discussed earlier. I term it the 'head-bob', therefore, to distinguish it. The head-bob clearly has the same primary function as throat-touching of ridding the bill of surplus water, which, in this particular grebe, shows up conspicuously as an accumulated droplet on its distinctively flattened gonys. Throat-touching itself is, at best, rarely performed by Black-necked Grebes and may not exist at all for, as in the case of the Red-necked Grebe outlined below, there is the distinct possibility of confusion with similar-looking movements.

Fig. 5. Black-necked Grebe *Podiceps nigricollis* head-bobbing (R. J. Prytherch)



Red-necked Grebe *Podiceps grisegena*

No mention of throat-touching was made by Wobus (1964) in his monograph of this species and my own observations indicate that, at best, as with the Black-necked Grebe, the behaviour is rare. During 14 hours of close watching of a pair in Denmark in June 1967, I established the following: (1) the grebes seldom if ever throat-touched after diving or when surface-hunting; (2) instead, they usually only head-shook (once, sometimes twice) to dispel the water that ran down the bill and collected on the gonys, or, less frequently, head-shook and then preened dorsally, often near the shoulder; (3) on a few occasions, they preened frontally on the lower foreneck, did a head-bob (in the manner of the Black-necked Grebe), or dipped the bill in the water instead; (4) on four occasions, they seemed to do a full throat-touch, but could more likely have been performing one of the movements just mentioned above; (5) no throat-touching was seen for certain during preening, not even after the bill got wet during ventral preening or head-scratching, though one bird did dip-shake; instead, they usually either head-shook or preened, or did both; (6) no throat-touching was seen either in some other situations in which the Great Crested Grebe throat-touches: in the rain, after eating little fish, after eating a feather, or after mandibulating nest-material.

Fig. 6. Red-necked Grebe *Podiceps grisegena* bill-draining by preening (R. J. Prytherch)



In September 1969, at Cheddar Reservoir, Avon, I watched an immature Red-necked Grebe for over seven hours. It never throat-touched, neither after a dive nor while surface-hunting, preening or head-scratching. After surfacing, it usually did a head-shake; sometimes, this was followed sooner or later by dabbling the bill in the water (bill-dipping), by submerging the bill and part of the head (peering, as during surface-hunting), or, less often, by preening. After this, it tended to remain inactive during the rest of the pause between dives, though sometimes it did another head-shake, or an odd preen, or peered under the water.

The head-shaking consisted of a marked lateral jerk, which seemed often to be a more forceful movement than the standard head-shake of the other grebes studied; in the case of the Red-necked Grebe, it appears largely to replace throat-touching, head-nodding and head-bobbing. Independent confirmation comes from Robin Prytherch (*in litt.*): he watched an

immature actively diving for 30 minutes on Kenfig Pool, Mid Glamorgan, in September 1977, and was surprised to see only head-shaking when he would have expected throat-touching (which he knows from the Great Crested, Little, Pied-billed, and Slavonian Grebes).

Discussion and summary

The five main methods used by grebes to dispel water from the bill fall into two classes: (1) head-shaking and (2) bill-draining movements, composed of throat-touching, head-nodding, head-bobbing, bill-dipping and preening. These may be compared with the methods we use to remove surplus ink from a pen-nib before writing. We may then: (a) wave or jerk the pen sideways (equivalent to head-shaking); (b) touch the point against another object, such as the ink-well (throat-touching); (c) flick it sharply downwards with an abrupt stop (head-nodding, head-bobbing); (d) touch the droplet of ink against the surface of the reservoir of ink remaining in the well (bill-dipping); or (e) rub it on a cloth or similar object (preening). So far as we know, all grebes remove at least some of the surplus water from both head and bill by head-shaking; some—including the Great Crested, Little, Pied-billed, Slavonian and Western—then drain away the rest mainly by throat-touching. The Black-necked Grebe, however, which rarely if ever throat-touches, dispels the remaining water largely by head-bobbing (a more efficient version of the head-nodding movement of some or all of the species already mentioned, in which it seems to be an incomplete throat-touch). At least occasionally, the Black-necked Grebe also drains away water from the bill by bill-dipping and by preening. Bill-draining by preening, however, seems to be rather a speciality of the Red-necked Grebe, which rarely if ever throat-touches, though it will head-bob and bill-dip. For this species too, lateral head-shaking appears to play an even more important role in ridding the bill of surplus water than for the other species observed. The peering behaviour of the immature Red-necked Grebe at Cheddar Reservoir may have represented an extreme form of bill-dipping, perhaps through the process of postural facilitation (the two movements sharing the same initial action). Observations on this bird might suggest that the bill-draining movements are learned by the Red-necked Grebe, at least to some extent: it mainly head-shook and bill-dipped, whereas adults watched in Denmark mainly head-shook and preened. Head-bobbing, however, is performed by the downy young of the Black-necked Grebe (see figure in Prinzinger 1974) and is probably innate, as the throat-touching of the Great Crested (Simmons 1970) and Little Grebes certainly is. The bill-draining method could be a useful ancillary field character in the cases of certain grebes which afford identification problems in non-breeding plumage under poor conditions of observation. Thus, among Palearctic species, a smallish black-and-white grebe that throat-touches habitually would be a Slavonian not a Black-necked; similarly, a winter Great Crested might at times be distinguished from a winter Red-necked on the same basis.

The whole topic of throat-touching and equivalent bill-draining behaviour of the grebes requires further study. We need information from more species—including those in the genera *Rollandia* (golden grebes),

*Lymnodytes** (Least Grebe), and *Poliiocephalus* (hoary-headed grebes)—and comparative data from other taxonomic groups of waterbirds. So far as I can judge, throat-touching is unique to the Podicipedidae. The closely convergent but unrelated divers (Gaviidae) do not appear to do it, nor do any diving seabirds, including the Brown Booby *Sula leucogaster* which I have studied intensively, nor the ducks (Anatidae) on which I worked professionally during 1970-73. Lateral head-shaking (with the bill inclined somewhat down) or latero-vertical head-flicking would appear to be the main response by ducks to water on the head and bill (see McKinney 1965); I recently confirmed this for surfacing Tufted Ducks *Aythya fuligula* and Goldeneyes *Bucephala clangula*, though such movements seem to be relatively infrequent. The evolutionary development of throat-touching in the family Podicipedidae is not fully clear. The behaviour is obviously much more specialised than the head-shaking that the grebes share with most or all other waterbirds. As throat-touching is absent or rare in the cases of some of the grebes themselves, it may have been derived from the head-nod, possibly via frontal preening of the foreneck. The head-nod itself may have evolved from bill-dipping and, in turn, given rise to the head-bob.

Acknowledgements

My work at the Avon lakes in 1966-70 was supported by the Nature Conservancy and later by the Natural Environment Research Council. Full acknowledgements were given elsewhere (Simmons 1970, 1974). In connection with the present paper, I should like to thank Robin Prytherch for his line-drawings. Dr Mathilde Schommer kindly translated part of Prinzing (1974) for me.

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*I cannot agree with my good friend Prof. R. W. Storer (1976, *Trans. San Diego Soc. Nat. Hist.* 18: 113-126) that the new-world Least Grebe should be put with the old-world dabchicks in the genus *Tachybaptus*, a course recently followed by Prof. K. H. Voous, rather incautiously in my opinion (1977, *List of Recent Holarctic Bird Species*). As it certainly does not belong in *Podiceps* either, I believe the Least Grebe is best placed in a genus of its own between *Tachybaptus* and the hoary-headed grebes *Poliiocephalus*, with both of which it shares certain character states, the name *Lymnoaytes* Oberholser, 1974, being available. This practice maintains the trend indicated by Simmons (1962, *Bull. BOC* 82: 109-116) towards the use of small genera as the best means of showing relationships within the family Podicipedidae.

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Interactions between House Sparrows and Sparrowhawks

C. J. Barnard



How does an efficient Sparrowhawk catch a sparrow?

How does a wily House Sparrow avoid being eaten?

Recent work on the development of feeding skills by young birds has highlighted the fact that many are less successful than adults at capturing prey (e.g. Orians 1969; Buckley & Buckley 1974). Young Oystercatchers *Haematopus ostralegus*, for example, take three years to become fully efficient (Norton-Griffiths 1968).

Many raptors, in particular, require considerable hunting skill in the face of sometimes elaborate anti-predator behaviour on the part of their prey. It would not be surprising, therefore, if inexperienced young showed a certain amount of ineptitude in catching prey that involved specialised hunting techniques.

The observations presented here are admittedly few and mostly qualitative, as appears to be a general problem with raptor behaviour, but they nevertheless provide an insight into both juvenile hunting and the anti-predator behaviour of prey. The attacks took place at a farm near Oxford during February and March 1977, three involving adult female Sparrowhawks *Accipiter nisus* and one a juvenile. In all cases, the prey were House Sparrows *Passer domesticus*, which were feeding close to hedges in open fields.

Behaviour of the hawks

All the hawks that I saw initiating attacks first approached their prey at high speed, flying close to the ground and close to the bottom of the hedge, but an important difference between the adults and the juvenile was that the former approached on the opposite side of the hedge to the prey, whereas the juvenile appeared to approach on the same side. In the last case, however, the confused behaviour of the fleeing sparrows made it difficult to be certain on which side of the hedge they had originally been sitting.

The efficacy of the adults' attacks seemed to depend on a rapid 'flick' over the top of the hedge, during which they tried to snatch any bird still sitting on an outer twig. Although none of the observed attacks was successful, the adults came substantially closer to success than did the juvenile. Indeed, another reason for supposing that the juvenile approached on the same side of the hedge as the sparrows was the absence of a 'flick': the hawk struck lower down on the approach side of the hedge.

A further important difference between the adults and the juvenile lay in the degree of attack persistence. After failure of the first attack, the adults immediately left and either searched another part of the hedge or left the area entirely; only one strike attempt was made during an attack. The juvenile, however, returned to make five further strikes after failure of the first. The adults' behaviour conforms to that recorded by Morse (1973) and is probably adaptive, since Sparrowhawks appear to depend on surprise for effective attack. The return strikes of the juvenile were all made from a perching position on the outside of the hedge, three being directed at one sparrow and two at another. The attempts were hopelessly unsuccessful and the hawk spent several seconds after each strike untangling itself from the hedge.

Behaviour of the sparrows

In common with many species of small passerine that feed in open fields, the sparrows did not venture far from cover. Furthermore, the length of their feeding bouts was very much determined by how far they were from cover (fig. 1): the farther they were from the hedge, the shorter was the duration of their feeding. They most often fed 18-20 m away from a hedge (fig. 2), which meant that most of their feeding bouts were very short. Feeding was punctuated by frequent returns to the hedge when the whole flock moved as a steady stream and gathered on the outer branches. After staying there for a few seconds, the sparrows filtered back to the feeding area.

In all the attacks, the sparrows were perched on the outside of the hedge when the hawks approached; that is, they were in between feeding bouts. To the human observer, they were markedly more conspicuous in this position, even when sitting still, than when they were out on the ploughed field, but it is not clear whether this was an important factor in the hawks' decision to attack. Certainly, hawks in the genus *Accipiter* do attack birds feeding on the ground (Goslow 1971) and are perfectly capable of selecting a target at ground level.

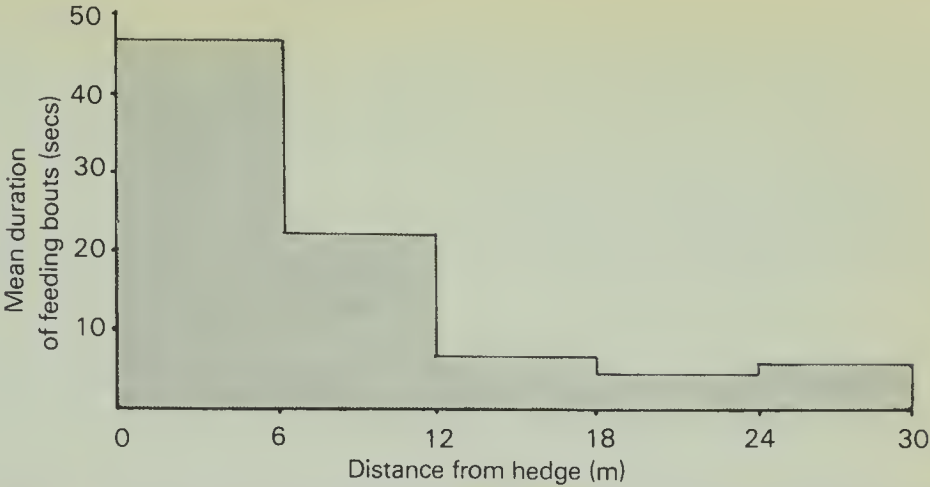


Fig. 1. Mean duration of feeding bouts of House Sparrows *Passer domesticus* (in seconds) in relation to distance from hedge (in metres), based on 42 observations at farm near Oxford in February and March 1977

When the approaching hawk was spotted, as it was in each attack, one or more of the sparrows gave the characteristic predator alarm call (see Summers-Smith 1963) and the whole flock retreated deeper into the hedge. During attacks, the sparrows kept up an incessant, high-pitched chatter, stopping only several seconds after the hawk had left. This is fairly typical behaviour of small passerines, and similar observations have been made by Marler & Hamilton (1966), Ficken & Witkin (1977) and others.

The three attacks by the adults all occurred along one particular hedge which, unfortunately, was too dense for me to be able to observe the sparrows (flocks of over 25 in all cases) while they were inside the hedge.

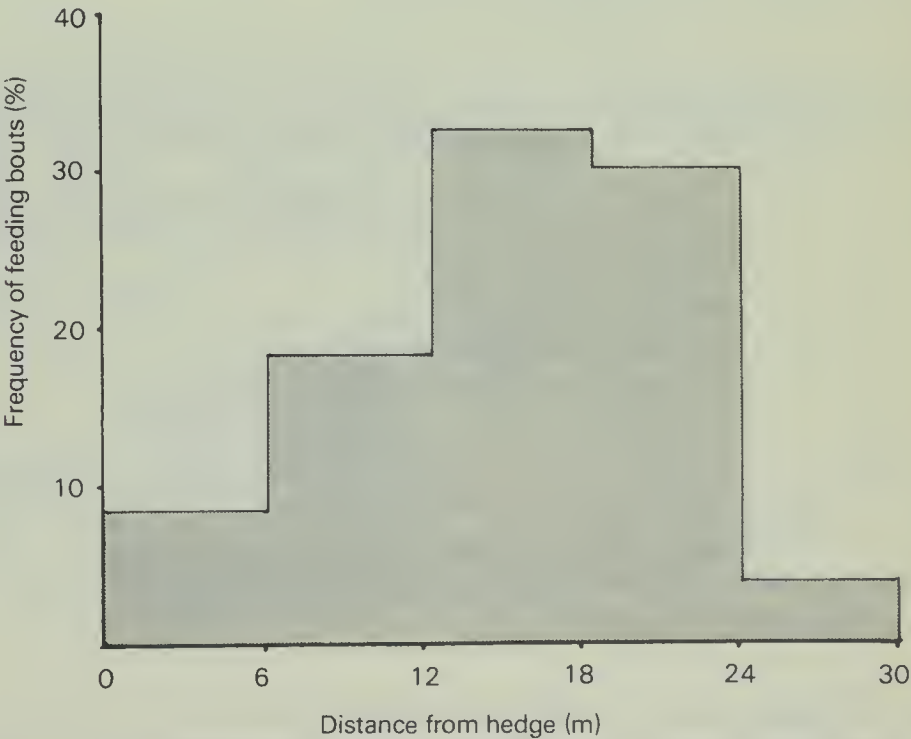


Fig. 2. Frequency of feeding bouts of House Sparrows *Passer domesticus* at different distances from hedge (in metres), based on 98 observations at farm near Oxford in February and March 1977

The juvenile Sparrowhawk, however, attacked a small group of 12 sparrows sitting in a particularly thin hedge, where they were visible for the duration of the attack. This provided a rare opportunity to watch their responses during the subsequent strike attempts in which target sparrows exhibited quite remarkable behaviour, which, so far as I am aware, has not been recorded before.

Instead of frantically moving away when the hawk first alighted in its vicinity, the target sparrow froze and appeared to become silent. It remained in this attitude until the hawk struck, whereupon it quickly dodged a short distance (4-5 cm) to either side of the line of strike and froze again; this behaviour was repeated during all strike attempts. Although the hawk and target were only a matter of 30 cm or so apart, the target was unobtainable so long as it remained in the hedge.

Discussion

The behaviour of the juvenile hawk illustrates two points worth comparing with that of the adults. First, its approach was almost certainly carried out on the 'wrong' side of the hedge so far as surprise attack was concerned, and this allowed plenty of time for the sparrows to retreat deep into the hedge before it could make a strike. Secondly, having failed (as did the adults) in its first attempt, the juvenile returned and made five fresh attempts to catch sparrows, even though they were unobtainable in the hedge. Two factors may explain this. If the juvenile was repeatedly inept at catching prey, hunger may have affected its decision to persist. Also, the sparrows were visible in the hedge and thus potentially available. Nevertheless, the juvenile wasted several minutes and risked injury from thorns, briars and branches while trying to reach the sparrows.

The advantage to the sparrows of retreating into the hedge is quite clear, and several authors have discussed similar behaviour by sparrows and other passerines (e.g. Summers-Smith 1963, Ficken & Witkin 1977). What is worth noting here, however, is the extent to which the sparrows steadfastly remained in the hedge when apparently in severe danger of capture. It would presumably have been possible for them to attempt to escape while the hawk was disentangling itself, but many avian predators are particularly adept at taking prey in the air (Rudebeck 1950-51) and Sparrowhawks themselves are more effective in the open (Brown 1976). Moreover, by remaining in the hedge, very little energy needs to be expended in avoiding capture, as the dodging behaviour I have described illustrates. It seems that thin cover is all that is necessary (the potential prey need not be concealed from view) for effective protection and to minimise the effort of predator avoidance. From the behaviour of the juvenile hawk, it appears that awareness of this and surprise-approach tactics both have to be learned at some initial cost.

Acknowledgements

I should like to thank Dr J. R. Krebs, Jon Erichsen, Peter Garson and Richard Cowie for reading this paper in an earlier form. The observations were made while I was supported by a grant from the Science Research Council.

Summary

A juvenile Sparrowhawk *Accipiter nisus* was inefficient in its hunting behaviour when compared with adults, because it approached on the 'wrong' side of the hedge and so failed to achieve surprise, and persisted in fruitless strike attempts when its prey was unobtainable. Persistence may have been brought about by hunger or deceptive prey availability. Retreating into cover provided not only immediate safety for the prey species (House Sparrow *Passer domesticus*), but also minimised the cost of further predator avoidance. Cover did not have to be extensive to provide this protection. Juvenile Sparrowhawks may have to learn efficient approach tactics and the costs (in terms of time and energy wastage and risk of injury) of attack persistence.

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Capricious taxonomic history of Isabelline Shrike

K. H. Voous



In *The Status of Birds in Britain and Ireland* (1971), the BOU Records Committee mentioned five records of birds of the so-called 'isabellinus' or eastern group of races of the Red-backed Shrike *Lanius collurio*. These are the same birds which in *The 'British Birds' List of Birds of the Western Palearctic*

(1978) are called Isabelline Shrike *Lanius isabellinus*. Earlier, these birds had been included by the BOU Taxonomic Sub-committee (*Ibis* 98: 167) in *Lanius cristatus*, which combines all Red-backed, Isabelline and Brown Shrikes of Europe and palearctic Asia in one species, as was also advocated by Stresemann (1927), Dementiev (in Dementiev & Gladkov 1954), Portenko (1960) and Voous (1960). Authors who have advocated splitting these shrikes up into three species—Red-backed *L. collurio*, Isabelline *L. isabellinus* and Brown *L. cristatus*—include Olivier (1944), Johansen (1952), Stresemann & Stresemann (1971, 1972), Mauersberger (1971) and Voous (1977).

Classic authors, such as Hartert (1907), Hartert & Steinbacher (1933), Stegmann (1930) and Vaurie (1959), combined the Red-backed and Isabelline Shrikes in one species (*L. collurio*) and kept the Brown Shrike (*L. cristatus*) apart, in spite of the fact that Isabelline and Brown Shrikes look much more alike than do Red-backed and Isabelline.

Clearly, the recognition of species in this group creates great difficulties. Stresemann, who wrote the most sensible accounts of these birds, changed his view: first, he combined them all in one species (1927) and, secondly, divided them up into three (Stresemann & Stresemann 1971). I shall try to explain what has led me to follow Stresemann's example by changing my mind, to recognise three species in my *List of Recent Holarctic Bird Species* (1977), instead of one, as in my *Atlas of European Birds* (1960). The basic data refer to plumage, reproduction, migration and moult. At the root of the problem stand the geographical distribution of the various forms and the history of their geographical isolation.

Plumage

Three groups can be distinguished:

(1) Red-backed or 'collurio' group (races *collurio*, *pallidifrons*, *kobylini*), in which adults show conspicuous sexual differences: males have grey head, rufous back and dark brown tail, whereas females are brown above, and creamy-white below with a variable amount of cross-barring.

(2) Isabelline, Red-tailed or 'isabellinus' group (races *phoenicuroides*, *isabellinus*, *speculigerus*, *tsaidamensis*), in which the sexes are the same: pale greyish-buff, with con-

spicuous rufous rump and tail, and white patch at base of primaries.

(3) Brown or 'cristatus' group (races *cristatus*, *confusus*, *superciliosus*, *lucionensis*), in which both sexes resemble 'isabellinus' group to a considerable degree, but differ by being darker, browner, often with some shade of rufous above, having tail yellowish- or buffish-brown, and showing no visible white patch in the wing.

Geography

Roughly speaking, the dark 'collurio' group inhabits Europe, including Asia Minor, northern Iran and western Siberia; the desert-coloured 'isabellinus' occupies south-central Asia, as far east in Transbaicalia as the border river Argun at 120°E; and the 'cristatus' group is from eastern and east-central Asia, reaching almost as far west as the river Ob at about 82°E. All groups meet in central Asia, notably in the southern Altai (fig. 1). Although no special study has been made, the differentiation of these groups seems to have taken place as eastern, central and western isolates during some time of the glacial periods.

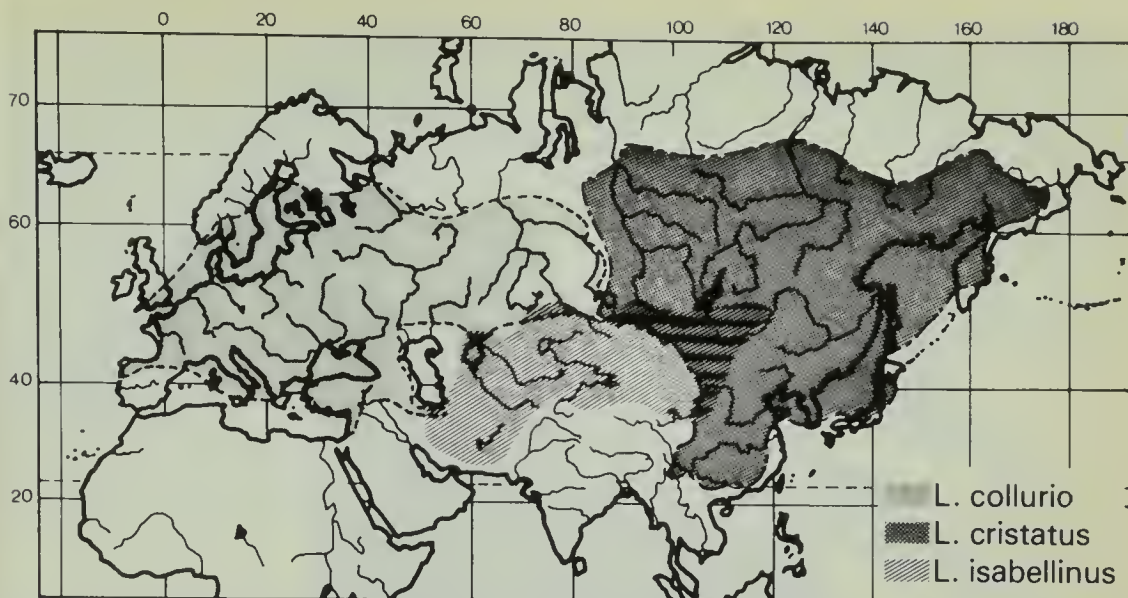


Fig. 1. Distribution of three species of shrike *Lanius*: Red-backed Shrike *L. collurio*, Isabelline Shrike *L. isabellinus* and Brown Shrike *L. cristatus*. (After Mauersberger 1971)

Reproduction

Where the '*collurio*' and '*isabellinus*' groups meet, widespread hybridisation has been reported, but data are contradictory on whether there is one or more zones of secondary intergradation, or whether there is still any selected mating. Of the contact between the '*collurio*' and '*cristatus*' groups in central Siberia, there now seems to be reason to believe, after reports to the contrary, that only two intermediate specimens ('hybrids') are known, collected near Tomsk on the river Ob (Mauersberger 1971). Still, in eastern Kazakhstan, hybridisation of all these shrikes seems to occur and, in the Tarbagatai, Johansen (1952) even speaks of a 'heillosen Durcheinander von Mischformen' (disastrous mixture of hybrids), involving mainly *phoenicuroides* × *speculigerus* × *pallidifrons*. Throughout, the '*cristatus*' group is found in woodland, whereas '*isabellinus*' occurs in desert scrub; but apparently this describes the main vegetational differences of the inhabited areas rather than the habitat preferences of the birds. No other ecological or behavioural data have been reported that could inhibit the forming of mixed pairs, other than the time of arrival in spring, when late arrivals (*cristatus*) might find early ones (*isabellinus*) already paired.

Migration

Most of these shrikes are long-distance migrants which winter in the tropics. The '*collurio*'-group shrikes winter in eastern, central and southern Africa and cover the longest distances (9,000-11,000 km). They enter Africa exclusively from the northeast. For those breeding in west and central Europe, this involves a remarkably 'hooked' migration route, which in autumn is first due east, then changes to south and southwest. Birds in the '*cristatus*' group winter mainly in south and southeastern Asia, each of the four races having a distinct main wintering area. Their routes may also have 'hooked' patterns, as the Siberian birds have to travel eastwards first,



235 & 236. Isabelline Shrikes *Lanius isabellinus*. Left, Pakistan, March 1977; above, Afghanistan, March 1972 (Ekko C. Smith)

then change to south or southeast. Shrikes in the '*isabellinus*' group winter in south and southwestern Asia and northeast Africa. The main wintering areas of some races are unknown, but their migration routes are not so long as those of the others.

Moult

There are widely varying moult patterns in this group, which seem to be primarily correlated with the migration behaviour (Stresemann & Stresemann 1971, 1972). As a rule, there is a tendency for the long-distance migrants to postpone the post-nuptial moult of flight and tail feathers until after safe arrival in their winter quarters, or to undergo a double moult annually. Both ways are unusual among palearctic migrant songbirds. Within the '*collurio*' group, flight and tail feathers are renewed only in the winter quarters. Shrikes in the '*cristatus*' group renew their flight and tail feathers twice annually: post-nuptial, on the breeding grounds, and pre-



nuptial, in the wintering area (Medway 1970), though moult may be temporarily arrested when long-distance migration has started. Within the '*isabellinus*' group, flight and tail feathers are renewed in a post-nuptial moult on the breeding grounds, and the tail feathers again in the wintering area. In this group, however, there is much variation, and not all of the subspecies wintering in Asia follow the general pattern.

237. Isabelline Shrike *Lanius isabellinus phoenicuroides*, Afghanistan, August 1970 (Stuart L. Pimm)

238. Isabelline Shrike
Lanius isabellinus isabellinus,
Afghanistan,
August 1970 (Stuart
L. Pimm)



Interpretation

Originally, authors have been influenced mainly by reproductive behaviour. On account of undeniable hybridisation, if not downright intergradation, several hybrid specimens (or perhaps populations) have even been given their own 'subspecific' names. One of these is '*karelini*' (Bogdanov) for intermediates between *kobylini* of the '*collurio*' group and *phoenicuroides* of the '*isabellinus*' group. As a consequence, recent authors have decided to lump the species, with or without *cristatus*. As the differences in moult pattern and migration routes gradually became clear, more and more authors were inclined to consider these as important characters of great survival value, evolved after long isolation; hence, as specific evolutionary attainments, of as much importance as reproduction behaviour. This may be true or not, depending on how mutable migration and moult patterns can be, and they seem to me to be very changeable. To this may be added the consideration that the detailed maps by Mauersberger (1971) show large regions in central and northern Mongolia where Isabelline and Brown Shrikes occur alongside each other without apparent interbreeding, and this may also be true of Isabelline and Red-backed Shrikes in Transcaspia. It should not be forgotten, though, that these regions are among the least covered by ornithological research in the whole Palearctic. One thing is certain, however: all these groups have acquired many distinct characteristics, testifying a long and efficient isolation. Apparently, they have started lines of development of their own, which is why I have followed Stresemann & Stresemann (1971, 1972) in recognising three incipient species, or rather semi-species, *Lanius cristatus*, *L. isabellinus* and *L. collurio*, constituting one complicated, marginal superspecies, collectively to be known as *Lanius cristatus* (this name has page-priority over *L. collurio*, both of Linnaeus 1758). These shrikes then represent that kind of border-line case in which the formal splitting as species is more likely to stimulate research of the numerous interesting problems involved than the otherwise more logical combination into one

species would ever do. This treatment more or less gives the specific status within the group the benefit of the doubt: it is certainly not considered to be a final answer. The combination of the 'collurio' and 'isabellinus' groups into one species, opposed to the 'cristatus' group, recently also advocated by Wolters (1978), is another, no less unlikely solution and might eventually prove to do more and appropriate justice to the facts than either the splitting into three or the amalgamation into one species.

At all events, the Isabelline Shrikes recorded in Britain have to be referred to one or other of the races of *Lanius isabellinus*, most probably *L. i. phoenicuroides*, or else one of the intermediate types originating from one of the nearest westernmost breeding ranges.

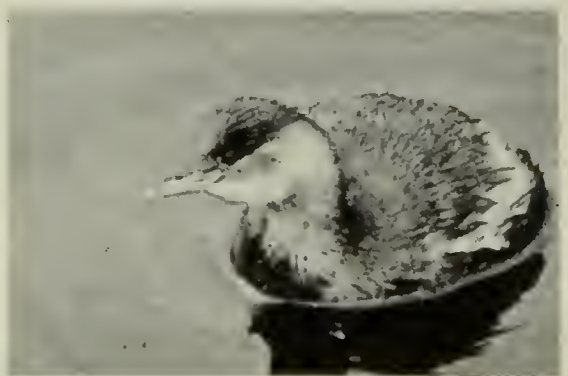
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Mystery photographs

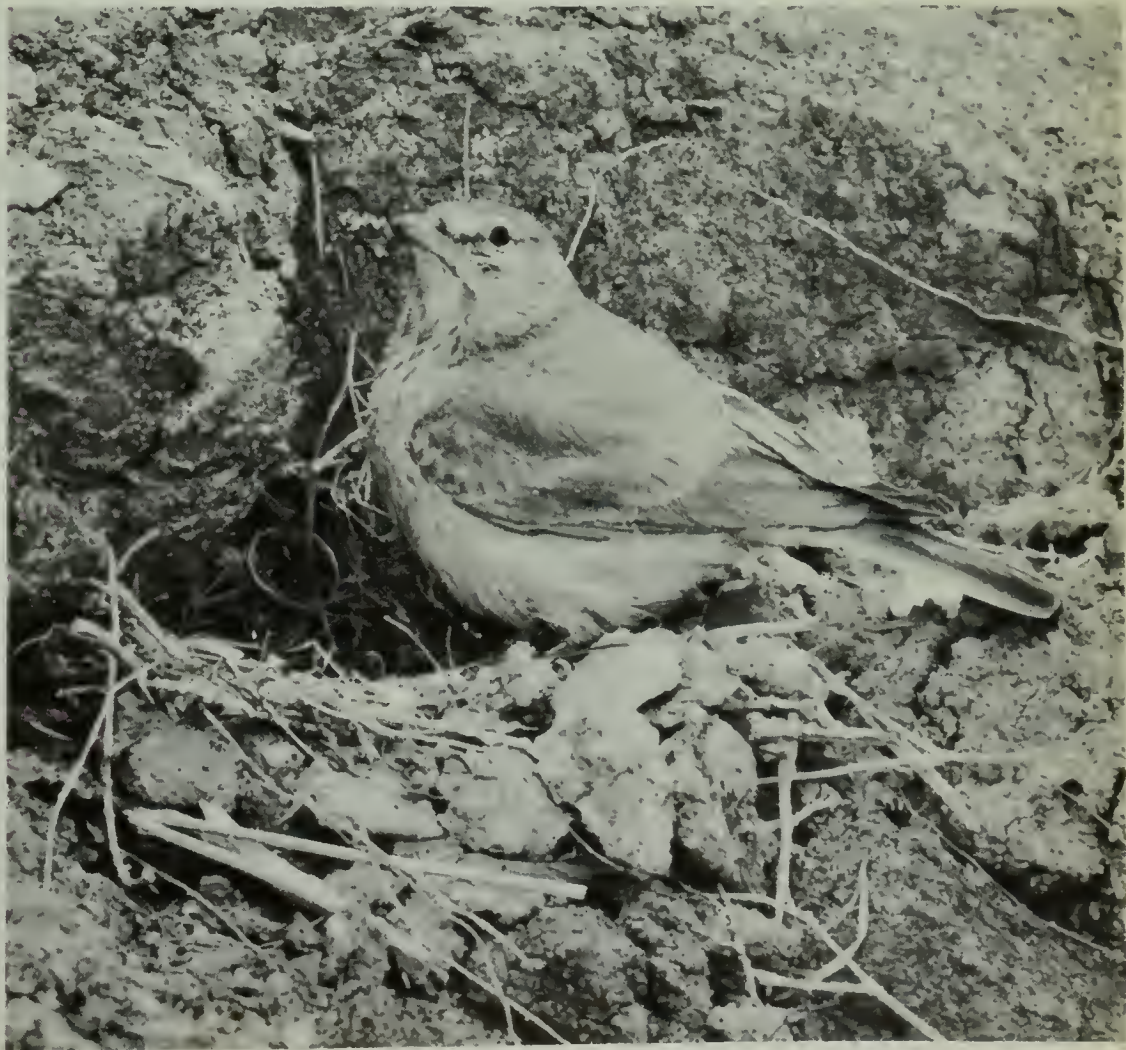
36 The main events of the bird-watching year can be allocated arbitrarily to the various seasons: in spring, the excitement of the arrival of each new summer visitor; in summer, breeding bird studies; in autumn, the succession of waders on the local coastal mudflats, reservoir or sewage-farm. In winter, however, most observers turn to waterfowl, particularly the ducks on natural and man-made lakes. The highlight of a



winter's day is often a peak count or the occurrence of a stray, be it rare duck, goose, swan, diver or grebe.

Last month's mystery photograph (plate 232, repeated here at reduced size) clearly depicted a small grebe. On a windless, clear day, swimming on calm water, this species should not create any identification problem. These weather conditions, however, are not typical of a British winter's day. On a dull, dismal morning, with grey clouds scudding westwards across the sky, the choppy water of a flooded gravel-pit is scanned and a small grebe with dark crown and strikingly contrasting whitish cheeks is glimpsed. As it bobs—often hidden by waves, often diving—eyes strain, behind wobbling binoculars held in numbed hands, to detect the distinctive features of Slavonian *Podiceps auritus* or Black-necked *P. nigricollis*. Is the bill straight, or uptilted? Is the black crown clear-cut or does it merge into the white cheeks? I noted these and other distinctions when discussing a previous mystery photograph, of a Slavonian Grebe (*Brit. Birds* 70: 543-544). I then also wrote, somewhat snootily: 'Although the Little Grebe *Tachybaptus ruficollis* has a white throat in winter and the buff sides to its neck are paler than the back of its neck (features which occasionally mislead a novice birdwatcher unfamiliar with the rarer grebes), the contrast never approaches that depicted [of Slavonian].' I now confess that, since writing

239. Mystery photograph 37. Identify the species. Answer next month



that sentence, I have myself been misled momentarily by a Little Grebe in viewing conditions which exaggerated the contrast of the head-pattern; I was alone and my error was soon rectified, but for several seconds I thought excitedly that I had found a Slavonian or Black-necked in my local patch. The dark top to the head of Little Grebe, and the dusky ear-coverts, foreneck and breast, contrasting with the pale throat, which hooks back behind the ear-coverts, combined with its rotund shape, can suggest a Black-necked Grebe in winter plumage. Careful inspection, however, will show that the dark areas are brownish and the pale areas mainly buff: the lack of strong contrast of black and white should prevent misidentification. But beware the brief glimpse and the hasty conclusion!

The winter-plumaged Little Grebe was photographed by J. B. & S. Bottomley in Cornwall in February 1972. JTRS

Best recent black-and-white bird-photographs

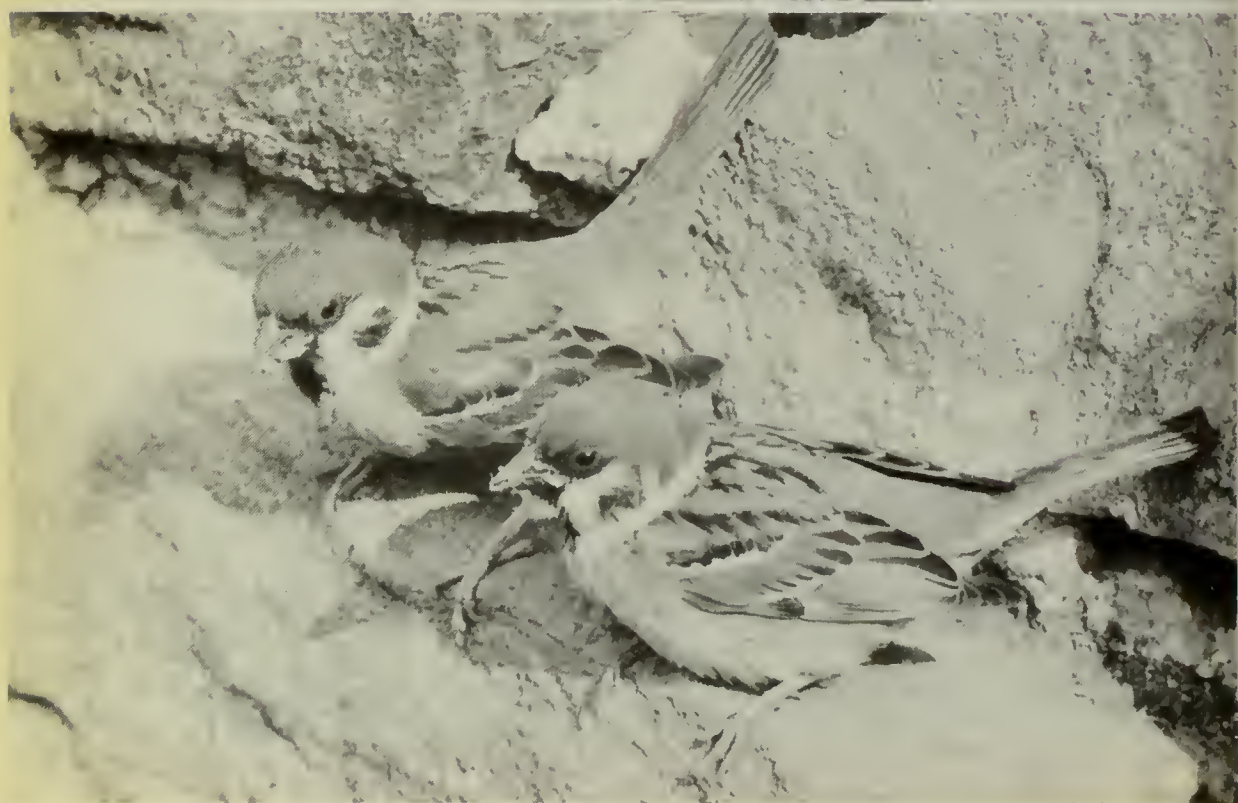
The trend towards increased use of colour by bird-photographers continues and some have now even wholly ceased to take black-and-white photographs. Nevertheless, the standard of those submitted for this feature remains very high. A total of 116 prints was submitted by 23 photographers. Our selection of 15 shows the work of ten photographers, no less than four of whom (P. Beasley, Anthony J. Bond, Bjørn Huseby and C. W. Taylor) had not previously been featured in this series, which has now been running for 20 years. It is also pleasing to find that some of our most regular contributors have again had their work selected: Dennis Green (for the eighth year), Dr Kevin Carlson (for the tenth year) and J. B. & S. Bottomley (for the thirteenth year). The entries and our selections reflect the welcome trend towards photography away from the nest. New lines of thought and more mobile equipment are perhaps equally responsible.

This year's 15 photographs depict 14 species, of which the following six have—surprisingly—never appeared before in the series. By drifting in an inflatable dinghy, Donald A. Smith obtained both a close-up of a swimming Manx Shearwater (plate 241) and an unusual shot of a party in flight against an island background (plate 240). The Yellow Wagtail is photogenic, so it is remarkable that none had been selected in the past 19 years and that the first one should not be one of our British race *M. f. flavissima* but of the black-headed race *M. f. feldegg*: photographed by Dr Kevin Carlson in Yugoslavia (plate 244). It is not surprising that the Bottomleys' Nearctic Pied-billed Grebe (plate 245) is new, but Anthony J. Bond's two very fine flight shots are of common British birds, Great Tit (plate 246) and Swallows (plate 247): evidence that success can be achieved without seeking exotic subjects. Corn Buntings, although not rarities, are often very shy: Michael Wilkes obtained his pleasing composition of one in snow (plate 254) by baiting, but the buntings visited the site only briefly.



240 & 241. Manx Shearwaters *Puffinus puffinus*, Shetland, July 1978 (Donald A. Smith)











2246-248. Top left, Great Tit *Parus major*, Greater Manchester, November 1977 (Anthony J. Bond); bottom left, Swallows *Hirundo rustica*, Cheshire, September 1978 (Anthony J. Bond); above, Sand Martins *Riparia riparia*, Norway, July 1978 (Bjørn Huseby)

2242-245. On pages 582 & 583. Top left, Pied Wagtail *Motacilla alba*, Worcestershire, June 1977 (M. C. Wilkes); bottom left, Tree Sparrows *Passer montanus*, Salop, July 1978 (D. N. Dalton); top right, Yellow Wagtail *Motacilla flava* (black-headed race *feldegg*), Yugoslavia, June 1978 (K. J. Carlson); bottom right, Pied-billed Grebe *Podilymbus podiceps*, USA, October 1978 (J. B. & S. Bottomley)





249-252. Top left, Kestrel *Falco tinnunculus*, Lancashire, November 1976 (Dennis Green); bottom left, Buzzard *Buteo buteo*, Lancashire, September 1977 (Dennis Green); above, Snipe *Gallinago gallinago*, Worcestershire, November 1977 (M. C. Wilkes); below, Sanderling *Calidris alba*, Nairnshire, September 1978 (C. W. Taylor)





253 & 254. Top, Fieldfare *Turdus pilaris*, West Midlands, February 1979 (P. Beasley); bottom, Corn Bunting *Miharia calandra*, Worcestershire, January 1979 (M. C. Wilkes)

Michael Wilkes has achieved another record in this selection. The standard of his entries was so high that we could not avoid selecting three: in addition to the Corn Bunting, his Pied Wagtail (plate 242) provides a fine comparison with Kevin Carlson's Yellow Wagtail, and his Snipe (plate 251) must be one of the most aesthetically pleasing portraits ever obtained of that species. It seems strange to recall that, although his Nightingale *Luscinia megarhynchos* was 'Bird Photograph of the Year' in 1976 (*Brit. Birds* 70: plate 25) and his Woodcock *Scolopax rusticola* was placed equal third in the same competition in 1978 (*Brit. Birds* 72: plate 105), Michael Wilkes's black-and-white work was featured in this series for the first time only last year. Dennis Green also sets a record, by having two prints selected for the third consecutive year. His Kestrel (plate 249) and Buzzard (plate 250) provide an interesting pair of raptor portraits: the former at a motorway-side perch and the latter having just landed beside a rabbit *Oryctolagus cuniculus* provided as bait.

The two Tree Sparrows (plate 243) were photographed by D. N. Dalton at a colony in the old sandstone wall from a hide on a moveable base on a trailer parked beneath their nest. Bjørn Huseby's Norwegian Sand Martins (plate 248) provide another very successful nest-site study. This year was the first in which this series was opened to foreign photographers and we were pleased to receive several very interesting entries from the Continent. We hope that even more will be submitted in future years. Waders are much-photographed, often en masse at high-tide roosts, but there is still scope for portraits of individuals in typical habitat, such as C. W. Taylor's Sanderling (plate 252). Finally, we must admire the superb sharpness of P. Beasley's suburban-garden Fieldfare (plate 253).

Next year's photographic competitions will have the same rules and closing dates as this year: 'Bird Photograph of the Year', 31st January; and 'Best recent black-and-white bird-photographs', 31st March.

We must again stress that birds on Schedule 1 of the Protection of Birds Act 1967 may not be disturbed at or near the nest without special approval from the Nature Conservancy Council (A. J. Lennox, 19-20 Belgrave Square, London SW1X 8PY).

ERIC HOSKING, M. W. RICHARDS and J. T. R. SHARROCK

European news

This is the sixth of these regular six-monthly reports. Records awaiting formal verification by national assessment committees are indicated by an asterisk(*).

Unless otherwise stated, records refer to single birds in 1979

Divers *Gavia* DENMARK Up to 104 on north coast of Odsherred, Zealand, in June (usually seen only singly in summer).

White-billed Diver *Gavia adamsii* FRANCE Second record: Antifer Harbour, Seine-Maritime, from 18th February to 30th

March, then found dead (cf. Netherlands, *Brit. Birds* 72: 275). First record was in October 1976. SWEDEN In recent years, regularly found wintering on Baltic coast, but not known whether due to population increase, shift in wintering area or increased observer-activity.

Squacco Heron *Ardeola ralloides* DENMARK Fourth record (second this century): Aerø on 19th May.

Western Reef Heron *Egretta gularis* FRANCE First record: egret showing the characteristics of this species in Camargue, seen June 1976 and, perhaps the same individual, late July to 12th August 1977 (*Terre et la Vie* 33: 307-324).

Little Egret *Egretta garzetta* FRANCE First breeding in north: one pair bred Baie de Somme in 1978 (*L'Oiseau* 49:39-43). NETHERLANDS First breeding: Flevoland in 1979 (near where Great White Egrets *E. alba* bred in 1978).

White Stork *Ciconia ciconia* BELGIUM First breeding since 1973: pair reared two young near Philippeville, province of Namur.

Mute Swan *Cygnus olor* MALTA First since 1926: December 1978.

Whooper Swan *Cygnus cygnus* FINLAND Now over 300 pairs breeding compared with only about 20 pairs in mid 1960s (cf. colonisation of Latvian SSR, *Brit. Birds* 72: 276 and below). LATVIAN SSR Fifth breeding site discovered.

Red-breasted Goose *Branta ruficollis* BULGARIA In January, about 15,000 wintering at Lake Shabla, southern Dobrudja.

American Wigeon *Anas americana* NETHERLANDS Second and third records: Scharendijke, Zeeland, on 22nd December 1978 and Dirksland, Zuid-Holland, on 13th January (first record was in November 1977, *Brit. Birds* 71: 255).

Marbled Duck *Marmaronetta angustirostris* BULGARIA First record of pair: at Garvan, 25 km west of Silistra on 9th June.

Red-crested Pochard *Netta rufina* SWITZERLAND Colonised Lake Klingnau; also nested again in other recently colonised areas (cf. expansion in Austria, Czechoslovakia and Poland, *Brit. Birds* 71: 583, 72: 276).

Ring-necked Duck *Aythya collaris* SWEDEN Seen in several localities in 1978 and 1979 (first record in 1976). SWITZERLAND Lac Lemman (Lake Geneva) 17th March to 25th April (cf. recent influxes to Britain and Ireland, *Brit. Birds* 72: 514-515).

Tufted Duck *Aythya fuligula* YUGOSLAVIA First breeding in Slovenia: few pairs near Ptuj.

Eider *Somateria mollissima* BULGARIA Second record: female on St Pctar Island, Sozopol, on 6th September 1978.

Long-tailed Duck *Clangula hyemalis* BULGARIA Second record: three adults 5 km south of Bourgas during 1978 midwinter count.

Black Kite *Milvus migrans* MALTA Usually scarce and irregular in spring, but party of 30 in April 1978 (previous maximum 16). SWEDEN Mixed pair, Black Kite-Red Kite, bred for fourth year: total of seven young fledged.

Red Kite *Milvus milvus* BELGIUM More numerous than previous years: at least three successful nests in the Ardennes (cf. *Brit. Birds* 72: 276). SWEDEN See Black Kite.

White-tailed Eagle *Haliaeetus albicilla* BULGARIA Highly doubtful whether this species now breeds in Bulgaria: only one pair (with no evidence of nesting) found along 170 km of River Danube from mouth of River Timok to Silistra in survey during 30th May to 11th June.

Griffon Vulture *Gyps fulvus* BULGARIA Breeding colony found in East Rhodopi Mountains: nine adults, 19 immatures and one occupied nest in June 1978; four adults, 16 immatures and two occupied nests, each with one young, in 1979. The area has been designated as a nature reserve.

Black Vulture *Aegypius monachus* BULGARIA A few adults in East Rhodopi Mountains in June 1977 and May-June 1978.

Montagu's Harrier *Circus pygargus* SWEDEN Further increase: about 50 pairs breeding, plus 20-30 non-breeding individuals (cf. *Brit. Birds* 71: 584).

Sparrowhawk *Accipiter nisus* DENMARK Highest numbers of migrants since 1960s: 860 at Skagen, North Jutland, on 3rd May 1978 and 700 at Gilleleje, North Zealand, on 14th April 1979.

Buzzard *Buteo buteo* SWEDEN Few breeding, and southward migration in May, due to almost total absence of rodents; low numbers of other rodent-dependent raptors and owls.

Lesser Spotted Eagle *Aquila pomarina* BULGARIA Total of 5,643 migrants observed at Lake Atanassovo (5 km north of Bourgas) during 11th-23rd September 1978; most in a day, 2,743 on 23rd.

Imperial Eagle *Aquila heliaca* BULGARIA Now

only three known occupied sites, compared with about 2,000 at the end of the 19th century.

Osprey *Pandion haliaetus* DENMARK Strong spring passages in 1978 and 1979: at Skagen, North Jutland, 378 in 1978 (double normal numbers), including 37 on 2nd May; in 1979, more than 100 at several places in Zealand (usually only 50-60 at best places in a season).

Merlin *Falco columbarius* FAEROE ISLANDS Now maximum of five pairs breeding (ten to 15 in 1966).

Hobby *Falco subbuteo* DENMARK High number of migrants: 155 in spring 1978 at Skagen, North Jutland (two or three times normal; cf. *Brit. Birds* 70: 495).

Grey Partridge *Perdix perdix* BELGIUM Large decrease following severe winter of 1978/79, and completely disappeared in some parts east of the River Meuse.

Spotted Crake *Porzana porzana* SWEDEN National census showed lowest number of singing birds for many years.

Demoiselle Crane *Anthropoides virgo* FRANCE Fourth and fifth records: in Champagne, with Cranes *Grus grus* on 20th November 1977 and alone on 19th November 1978 (*Alauda* 47: 35).

Great Bustard *Otis tarda* DENMARK First records since 1970: in January, one dead Reersø, west Zealand*; in spring, singly Møn* and Bornholm*. SWEDEN One in southwest in February (cf. *Brit. Birds* 72: 277).

Avocet *Recurvirostra avosetta* DENMARK Highest number ever: 8,000 Ballum Sluse, South Jutland, on 19th August 1978.

Collared Pratincole *Glareola pratincola* NORWAY First and second records: Vest-Agder during 1st-7th June 1976 and Möre og Romsdal during 9th-13th June 1978.

Greater Sand Plover *Charadrius leschenaultii* NETHERLANDS First record: found dead near lighthouse at Goeree, Zuid-Holland, on 20th July 1977 (cf. first British and Irish, fourth Maltese and second Polish records in 1978, *Brit. Birds* 72: 277, 520).

Caspian Plover *Charadrius asiaticus* NORWAY First record: Finnmark during 9th-15th June 1978.

Little Stint *Calidris minuta* DENMARK Large invasion autumn 1978, e.g. 400 Nisum Fjord, west Jutland, on 10th September 1978 (cf. large numbers in Norway in autumn 1978, *Brit. Birds* 72: 277).

White-rumped Sandpiper *Calidris fuscicollis* SWEDEN First record: Scania on 8th August 1978.

Purple Sandpiper *Calidris maritima* FAEROE ISLANDS Only a few pairs now breeding at Skúvoy (in 1966, five to ten pairs).

Marsh Sandpiper *Tringa stagnatilis* LATVIAN SSR First two records, in 1974 and 1975, both related to breeding; two subsequent records, in autumn 1976 and autumn 1979 (cf. first Finnish breeding in 1978, *Brit. Birds* 71: 584).

Terek Sandpiper *Xenus cinereus* NETHERLANDS Sixth record: Flevoland on 2nd June.

Turnstone *Arenaria interpres* FAEROE ISLANDS Very common in winter, and increasingly common in summer; still not proved to have bred.

Great Black-headed Gull *Larus ichthyaetus* FRANCE First record: Bassin d'Arcachon, Gironde, in winter 1978/79*.

Franklin's Gull *Larus pipixcan* FRANCE First record: first-winter Angers, Maine-et-Loire, 26th January to 27th February 1977 (*L'Oiseau* 49: 45-49).

Gull-billed Tern *Gelochelidon nilotica* FINLAND First record: Aspskär bird-station in August*.

Black Tern *Chlidonias niger* YUGOSLAVIA Few pairs near Ptuj, with Common Terns *Sterna hirundo* and Tufted Ducks *Aythya fuligula*.

White-winged Black Tern *Chlidonias leucopterus* SWEDEN Two breeding attempts by individuals paired with Black Terns *C. niger*, on Öland in 1978 and at Lake Tåkern in 1979.

Little Swift *Apus affinis* SWEDEN First record: with Swifts *A. apus* in Scania in early June.

Grey-headed Woodpecker *Picus canus* SWEDEN After becoming extremely rare in last few decades, now perhaps a slight recovery recently, with increase in number of breeding records.

Short-toed Lark *Calandrella brachydactyla* YUGOSLAVIA First record in Slovenia: flock of about 20 near Ribnica in late April.

Shore Lark *Eremophila alpestris* AUSTRIA Various observations in January-February included flock of 45 near Krieglach, Styria (cf. records in German Federal Republic and Switzerland, *Brit. Birds* 72: 279). SWITZERLAND Male (not in full plumage) singing in Le Prese in Puschlav during 11th-13th June*.

Sand Martin *Riparia riparia* YUGOSLAVIA First breeding for many years in Slovenia: colony of 28 pairs near Ptuj.

Meadow Pipit *Anthus pratensis* SWITZERLAND Rediscovery of isolated population of at least 20 pairs on Altmatt in Biber valley at Rothenturm and at north and south ends of Lake Sihl; not known in this area for 15 years, and not found in atlas fieldwork, but probably overlooked (cf., however, expansion in Austria, *Brit. Birds* 71: 585).

Wren *Troglodytes troglodytes* DENMARK Up to 80% mortality in winter 1978/79.

Nightingale *Luscinia megarhynchos* SWEDEN At least three males heard in 1979 (only four records up to 1976).

Bluethroat *Luscinia svecica* CZECHOSLOVAKIA First breeding of white-spotted race *L. s. cyanecula* was in Slovakia in 1950. Now, colonisation by red-spotted race *L. s. svecica*: in 1977, singing males in western Krkonoše Mountains; in 1978, five pairs estimated (three nests found); in 1979, seven singing males and three nests found in same area, and three and one singing males elsewhere in Krkonoše Mountains. Individuals ringed in 1978 were recaptured in 1979 (cf. breeding in Austria and Romania, *Brit. Birds* 71: 585).

Red-flanked Bluetail *Tarsiger cyanurus* NORWAY First and second records: adult male in Finnmark on 9th August 1977 and adult female in Vestfold on 5th November 1978.

Siberian Thrush *Zoothera sibirica* SWITZERLAND First record: Collombey on 8th December 1978.

Fieldfare *Turdus pilaris* FRANCE Westward extension: one pair bred near Versailles, first breeding record for Paris area (cf. *Brit. Birds* 71: 257, 585; 72: 280).

Cetti's Warbler *Cettia cetti* MALTA Now breeding in at least eight localities (breeding first proved in 1970).

Fan-tailed Warbler *Cisticola juncidis* MALTA Now widespread and breeding in most areas (first nest found in 1973) (cf. *Brit. Birds* 65: 501-510; 70: 152-159, 496; 71: 256, 585; 72: 280).

Savi's Warbler *Locustella luscinioides* LATVIAN SSR First breeding records: in southwest in 1972 and 1973; range extended to east, in region of Lake Lubana, in 1978 and 1979. SWEDEN Increasing: about ten males singing (cf. Estonian SSR, *Brit. Birds* 71: 256; Latvian SSR, 71: 256 and above).

Paddyfield Warbler *Acrocephalus agricola* SWEDEN Male at Örebro in summer*.

Great Reed Warbler *Acrocephalus arundinaceus* CZECHOSLOVAKIA Very large decrease in past few years (cf. contrary in Sweden, *Brit. Birds* 71: 586); in southern Bohemia, now

outnumbered more than 100:1 by Reed Warblers *A. scirpaceus*.

Melodious Warbler *Hippolais polyglotta* SWEDEN First record: Ottenby on 10th October 1978.

Greenish Warbler *Phylloscopus trochiloides* CZECHOSLOVAKIA In 1978, two singing males in Moravia from mid June to early July (cf. Denmark, Finland, Poland, *Brit. Birds* 71: 586). DENMARK In spring 1978, at least five records on Zealand (normally only one or two) (cf. Norway in 1978, *Brit. Birds* 72: 280).

Willow Warbler *Phylloscopus trochilus* YUGOSLAVIA First breeding record in Slovenia: few pairs in deciduous wood near Ptuj.

Bearded Tit *Panurus biarmicus* LATVIAN SSR Very few breeding compared with 1978, after very cold winter of 1978/79. SWEDEN Considerable decrease, e.g. at Lake Tåkern, from several thousand pairs in 1978 to about 100. SWITZERLAND Lake Neuchatel population overwintered well. (Cf. Denmark, *Brit. Birds* 72: 280.)

Penduline Tit *Remiz pendulinus* YUGOSLAVIA First breeding colony in Slovenia: about ten pairs near Ptuj (previous record: single brood near Ljubljana in 1975).

Masked Shrike *Lanius nubicus* BULGARIA Known only as irregular breeder in area of Kresna Gorge in southwest, but now one pair seen 5 km east of Stara Zagora.

Rose-coloured Starling *Sturnus roseus* SWEDEN Small influx at end of May: five at three localities.

Siskin *Carduelis spinus* BELGIUM High level in summer 1978, with probably several hundreds of pairs in extreme east.

Redpoll *Carduelis flammea* FINLAND Breeding commonly in whole country (usually only in middle and north).

Two-barred Crossbill *Loxia leucoptera* FINLAND Breeding in many places in north; later, autumn wanderers elsewhere. SWEDEN Several observations of individuals with other crossbills *Loxia* in August may indicate forthcoming autumn invasion.

Scarlet Rosefinch *Carpodacus erythrinus* AUSTRIA Further westward expansion: pair in June and July near Wald am Arlberg, Vorarlberg. BELGIUM First spring record: Hoeilaart on 27th February 1977. YUGOSLAVIA A few pairs bred successfully on Ljubljana Marsh. (Cf. *Brit. Birds* 70: 219; 71: 586; 72: 280.)

Rustic Bunting *Emberiza rustica* ESTONIAN SSR Second record and first breeding: pair with nearly fledged young near Ohepalu,

Rakvere district, on 19th June* (cf. *Brit. Birds* 71: 587; 72: 280).

Little Bunting *Emberiza pusilla* ESTONIAN SSR
First record: pair at Imavere on 25th April*.

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Notes

As readers will have noted, *British Birds* is currently very successful, with a greatly increased number of subscribers. This success has produced various side-effects, including a much higher number of typescripts submitted for publication. With limited space available, this inevitably means that papers and, especially, notes have to be selected even more rigorously than usual and, in some cases, severely pruned. The Notes Panel has always been very careful in its scientific assessment of notes, but the sheer volume of current submissions has forced it to apply even stricter standards before acceptance. As always, publication is in sequence of receipt, except that particularly topical items are given precedence. We do not wish to discourage submission of notes, but need to point out (1) that publication is now more difficult to achieve than before (only 44% of submissions are accepted for inclusion), although many of those not printed are filed for possible future reference or summary, and (2) that there may often be a considerable delay before an individual note is published. Eds



Greenshank uttering breeding-ground 'chip' note in winter On 29th November 1977, in the Gann estuary, near Dale, Dyfed, a Greenshank *Tringa nebularia* standing on a low mud bank beside a stream persistently

uttered, in long sequences, the note described in *The Handbook* as a 'quick, loud, insistent chip-chip-chip' and said to be common on the breeding ground. It continued for several minutes, with very short pauses between utterances. Alarm or anxiety was unlikely, since a Redshank *T. totanus* was feeding close by. From the same spot, on 13th December, I heard the note repeated twice, less loudly and in shorter sequences; and, on 9th January 1978, it was repeated a number of times, but with less insistence than on the first occasion.

T. A. W. DAVIS

South Mullock, Dale, Haverfordwest, Dyfed

Desmond Nethersole-Thompson has commented that the 'chip chip chip' note is used by Greenshanks in many different emotional or tension situations, particularly in the breeding season. It is uttered in several different rhythms. In the instance described by Mr Davis, the presence of a Redshank on the Greenshank's favourite feeding ground may have triggered off the 'chipping' cries. EDS

Immature Common Gull food-begging to Lesser Black-backed Gull On 15th January 1978, at Morecambe Bay, Lancashire, Jane McCulloch and I witnessed apparent food-begging by a first-winter Common Gull *Larus canus* to an adult Lesser Black-backed Gull *L. fuscus*. Both were on the water at high tide, along with Common, Black-headed *L. ridibundus* and Lesser Black-backed Gulls of all ages. The Lesser Black-backed was attempting to swallow a large food item which was floating on the surface. The Common Gull swam close, uttering a weak, high-pitched call, reminiscent of that of an adult, but higher and less pure. Its body was rather low in the water, and its beak was directed diagonally upwards; it swam around to the front of the Lesser Black-backed and began to peck at the red spot on the latter's beak. This continued for several minutes, before the larger species, which had until then ignored the Common, swam away. Soon afterwards, three Lesser Black-backed Gulls arrived and drove the Common away. The date is very late for food-begging of any kind by a gull, and it is particularly interesting that it should be directed towards another species.

LAURENCE N. ROSE

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Food-begging would normally include head-tossing, which apparently did not occur in this case. Derek Goodwin has, however, observed food-begging by young Herring Gulls *L. argentatus* in March, and he also remarked that low-intensity begging, without head-tossing, may be a not uncommon response of gulls towards another gull which has food but which they dare not attack. EDS

Little Owl's method of catching cockchafers Between 25th June and 6th July 1947, in a garden at Ventnor, Isle of Wight, I watched a Little Owl *Athene noctua* from a window, at close range, feeding. At dusk, while the light was still good, a pair with newly fledged young nearby visited the garden regularly. One would perch on a pine *Pinus* beside the lawn; when cockchafers *Melolontha melolontha* and other beetles began flying about the cones, it flew to take them in the air, often turning and twisting in pursuit, before returning to its perch. Frequently, a cockchafer alighted on the lawn; the owl immediately flew down and stood over it, bending its head deliberately to look at the insect, before quickly stooping to snap it up. The

prey was usually swallowed whole, but was sometimes held up in the left foot while the owl bent down to take two or three bites. The owl then either returned to its tree perch or remained standing on the lawn and watching. If the latter, it would, on seeing another chafer alight on the far side, fly low, land by it and pick it up; a chafer landing close by was reached with only two or three hops; if the insect settled 5-10 m away, the owl would run straight to it with remarkable speed, stop abruptly and seize it. Fragments of cockchafers and other beetles were found in the owl's pellets below a nearby cypress *Cupressus*.

GEOFFREY BEVEN

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David Glue, joint author of a forthcoming paper in *British Birds* on this species, has commented that little seems to have been written on the hunting methods of the Little Owl (but see *Brit. Birds* 29: 302-305; 31: 162-187, 205-229, 249-264; and *Ardea* 34: 214-246). He added that Little Owls are very confiding during the breeding season, when their hunting techniques are fairly easy to observe. They usually sit on a branch, post or building and drop silently on to any prey that moves below or nearby; occasionally they hover above the ground at 1-2 m, somewhat clumsily compared with the Barn Owl *Tyto alba*. Flying insects are pursued from vantage points in a remarkably agile flight. Another method is to walk or run very quickly on the ground, as observed by Dr Beven. EDS

Carrion Crow attempting to mate with Buzzard On 2nd April 1975, while driving near Balranald, North Uist, Western Isles, M. R. Alibone, A. D. J. Cook, S. M. Whitehouse and I noticed two Buzzards *Buteo buteo* on a rock about 50 m from the road. Through binoculars, we saw that they were mating. The male flew off and within seconds a Carrion Crow *Corvus corone* of the race *cornix*, which had been perched on a nearby rock, attempted twice to mate with the female Buzzard in the normal manner; the latter sat motionless throughout, apparently unperturbed. Shortly afterwards, the crow flew off, while the Buzzard remained on the rock for several minutes.

ROBERT W. BULLOCK

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Derek Goodwin has commented as follows: 'Most interesting is that the crow should try to copulate with a species usually attacked as a "predator". So far as I recall, males of whydahs *Vidua* and a male House Martin *Delichon urbica* (*Brit. Birds* 66: 398-400, plate 60b) seem the only species recorded trying to copulate with other species in the wild, but this probably occurs less seldom than records suggest. In captivity, quiescent doves (Columbidae) seem to "provoke" copulation attempts from many species of passerine and from Budgerigars *Melopsittacus undulatus* of both sexes.' Mr Goodwin also conjectured that perhaps the lament by the female Peregrine *Falco peregrinus* over her false tiercel in Chaucer's *Canterbury Tales*—'And sodeynlee he loved this Kyte so, that all his love is cleane from me y-go'—was based on a similar observation involving falcon *Falco* and kite *Mitrus*. EDS

Yellowhammers roosting in reed-beds *The Handbook* states that Yellowhammers *Emberiza citrinella* usually roost in hedgerows, bushes, gorse *Ulex*, scrub, cornstacks and occasionally in rank ground vegetation. In Derbyshire, this species regularly roosts communally in beds of common reed *Phragmites australis*, with Reed Buntings *E. schoeniclus* and sometimes

also with Corn Buntings *Miliaria calandra*, in some numbers from October/November to April, with very small numbers in September and May; maxima usually occur in February. The favoured site, where I have counted up to 200, is a small reed-bed of about 0.4 ha on dry ground, but flocks of up to 100 have used beds in shallow water up to 50 cm deep. I have not recorded Yellowhammers at a nearby bed of greater reed-mace *Typha latifolia* where Reed Buntings are regular, but, in the winter of 1961/62, small numbers regularly roosted with Corn Buntings in another bed of *Typha* at Killamarsh.

R. A. FROST

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On the afternoon of 23rd January 1976, M. N. Coates and I were mist-netting Reed Buntings at a roost in a small reed-bed near Seaton Delaval, Northumberland, where the water was about 50 cm deep. Small numbers of Corn Buntings were also roosting at the site, and about 15 minutes before dusk we noticed several Yellowhammers gathering in a nearby hawthorn *Crataegus*. When we last visited the nets before complete darkness we flushed about 20 Yellowhammers from the centre of the bed where the water was deepest; several were caught and ringed. The temperature was normal for the time of the year: slightly above freezing.

MIKE S. HODGSON

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Fifty years ago . . .

'Finding that there was no authentic record of the Pintail ever having nested, in the wild state, in England, we realised that very much more evidence was needed . . . Miss E. L. Turner, Dr. B. B. Riviere, Mr. T. A. Coward, and Canon Raven, amongst others, all saw the nest and the sitting bird, and none of them evinced any doubt whatsoever. Being anxious not to disturb the bird we left her in peace . . . ' (*Brit. Birds* 23: 192, December 1929)

Letters

Identification of Blyth's Reed and Paddyfield Warblers I have seen only one Blyth's Reed Warbler *Acrocephalus dumetorum* (*Brit. Birds* 63: 214-216) and no Paddyfield Warblers *A. agricola*, but I have examined a large number of published and unpublished black-and-white photographs and colour transparencies of the two species. In every instance, the portrait has been instantly identifiable by one feature: the supercilium. That of Paddyfield is usually wide and prominent, but is always *widest behind the eye*; the much shorter supercilium of Blyth's Reed, however, although variable and sometimes almost completely absent, is invariably *widest in front of the eye*. This distinction has not been emphasised in texts nor illustrated in drawings in recent accounts (e.g. *Brit. Birds* 66: 385-386; 71: 95-101; 72: 348-357). Details of field observations which confirm or refute this photographic evidence would, therefore, be welcome.

J. T. R. SHARROCK

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The Voous sequence Most ornithologists will surely welcome some stability in the classification of Holarctic bird species and the seemingly wide acceptance of Professor Dr K. H. Voous's list (*Ibis* 115: 612-638; 119: 223-250, 376-406); its use by the editors of *BWP* must give some hope for that stability.

It would be asking too much of Professor Voous to elaborate, for the layman, upon all the difficult decisions concerning the various taxa, but the note on Scottish Crossbills *Loxia scotica* was of obvious interest to readers of *British Birds*. I note, however, that, in the editorial of the same issue (*Brit. Birds* 71: 1-3), you propose to publish the reasons for Isabelline Shrike *Lanius isabellinus* gaining specific rank and I welcome this, especially as I have been seeing an array of 'red-tailed shrikes' recently. Recently, too, I have been fortunate enough to encounter Hume's Lesser Whitethroat *Sylvia (curruca) althaea* and fully endorse the excellent notes you published by D. I. M. Wallace (*Brit. Birds* 66: 376-390). In his field notes, Wallace, and his distinguished companions, noted consistent vocal, structural and plumage differences between the three 'Lesser Whitethroats' *S. c. curruca*, *S. c. minula* and *S. c. althaea*. The last two forms seem to be ecologically separated in Iran where they overlap, but presumably this group has not reached the degree of reproductive isolation found in the crossbills *Loxia* and shrikes *Lanius*?

May I ask that, where western Palearctic species are involved, vexing questions of classification be elaborated upon in your journal? One thinks immediately of Redpoll *Carduelis flammea* and Arctic Redpoll *C. hornemanni*; Collared Flycatcher *Ficedula albicollis* and Semi-collared Flycatcher *F. semitorquata*; Red and Willow Grouse *Lagopus lagopus*; Little Tern *Sterna albifrons* and Saunder's Little Tern *S. saundersi* (although the latter is not on the west Palearctic list); and perhaps even the ecologically separated 'Rock' and 'Water' Pipits *Anthus spinoletta*, and the allopatric Carrion Crows *Corvus corone cornix* and *C. c. corone*, where the hybridisation zone is very narrow.

I am not competent to quarrel with Professor Voous over taxonomic matters, but would question your implication that few birdwatchers are interested in such points, especially at the species level. Further papers outlining the reasons and current thinking behind this seemingly inconsistent treatment of avian classification would be of great interest.

GRAHAM BUNDY

c/o PO Box 98, British Aerospace, Dhahran, Saudi Arabia

The paper by Professor Voous on Isabelline Shrike, eagerly awaited by Mr Bundy, appears on pages 573-578. Decisions on the status—specific or racial—of closely related forms are the personal decisions of individual taxonomists, based on what each considers to be a common-sense analysis of the accrued evidence. Opinions vary, not only from worker to worker, but also with time, as new evidence appears or is interpreted afresh. Field characters and behaviour are part of this evidence and publication of relevant observations are—obviously—welcomed by taxonomists, since they aid reassessment of status.

While taxonomists' opinions are ever-changing and taxonomy is a dynamic science, other workers need stability—of names and of sequence of listing—so that the sensible compromise is a periodic full review. Hopefully, the Voous sequence—adopted by *BWP*, by *British Birds* and now by all the major ornithological bodies in Britain—will remain in use for at least as long as its predecessor (the Wetmore order was followed in Britain for 16 years, from 1962 to 1977). Eds

Announcement

Swiss atlas The breeding bird atlas of Switzerland (*Verbreitungsatlas der Brutvögel der Schweiz/Atlas des Oiseaux Nicheurs de Suisse*), covering 1972-76, with maps similar to those in the BTO/IWC *Atlas* and texts in both German and French, will be published early in 1980 at Swiss Fr. 58 plus postage. It will include a short explanatory section for English readers. Anyone wishing to be sent a copy (with an appropriate invoice) should send their name and address now to the atlas organisers: Schweizerische Vogelwarte Sempach, CH-6204 Sempach, Switzerland.

Requests

Norwegian and Swedish atlases Casual observations from visiting birdwatchers for named squares will be welcomed for inclusion in the atlases of breeding birds of Norway and Sweden. Experienced atlas fieldworkers willing to assist with the projects by undertaking a thorough survey of one or more 10-km or 5-km squares during spring or summer are invited to contact (well before their visit) the relevant national organiser: Steinar Eldøy, Liljevegen 2, 4300 Sandnes, Norway, or Dr Sören Svensson, Zoological Institute, University of Lund, S-223 62 Lund, Sweden.

Survey of breeding terns in Orkney and Shetland Recent localised surveys of breeding Arctic Terns *Sterna paradisaea* in Orkney and Shetland suggest that numbers may have decreased since the last major census, during 'Operation Seafarer' in 1969-70. A survey is planned for 1980, with two full-time field-workers, but extra help would be welcomed to ensure that coverage is comprehensive. We shall contact counters known to visit particular colonies, but anyone else who may be in these islands (or indeed any other remote part of Scotland) during June or July and who would be willing to help is asked to contact the local RSPB representatives (David Lea in Orkney and Bobby Tulloch in Shetland), who will be able to provide instructions and recording cards, or to write to Dr L. H. Campbell, RSPB, 'The Lodge, Sandy, Bedfordshire SG19 2DL.

Diary dates

This list covers events taking place during January to December 1980. We welcome submission of details for possible inclusion in the next list, covering July 1980 to June 1981.

4th-6th January BTO RINGING AND MIGRATION CONFERENCE. Hayes Conference Centre, Swanwick, Derbyshire. Applications to BTO, Beech Grove, Tring, Hertfordshire HP23 5NR.

15th January BRITISH ORNITHOLOGISTS' CLUB. Dr C. J. Bibby on 'Ecological aspects of navigation'. Central London. Non-members should write (enclosing SAE) to hon. secretary, R. E. F. Peal, 2 Chestnut Lane, Sevenoaks, Kent TN13 3AR.

15th-17th February BTO SPRING CONFER-

ENCE. Hayes Conference Centre. Applications to BTO.

29th February—2nd March ALL IRELAND CONFERENCE. Jointly organised by the RSPB and the Irish Wildbird Conservancy. Talbot Hotel, Wexford.

17th March—18th May (excluding 7th April) YOUNG ORNITHOLOGISTS' CLUB MIGRATION PHONE-IN. Telephone Sandy (0767) 80551, Mondays only 2.00 p.m.-7.00 p.m. Records from adults welcomed.

29th March BOU ANNUAL GENERAL MEETING. British Museum (Natural History). Buffet supper. Talk 6.30-9.30 p.m.

11th-13th April RSPB MEMBERS' WEEKEND. University of York. Speakers include Dr David Bellamy, Eric Simms and Roy Dennis. Full details from Conference Organiser, RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL.

18th-20th April SCOTTISH ORNITHOLOGISTS' CLUB NORTHERN MEETING. Inverness. Applications to Club Secretary, SOC, 21 Regent Terrace, Edinburgh EH7 5BT.

5th May YOC ANNUAL SPONSORED BIRD-WATCH.

29th May WILDFOWL TRUST AGM. Arundel, Sussex. 12 noon.

11th-23rd July SOCIETY OF WILDLIFE ARTISTS' ANNUAL EXHIBITION. The Mall Galleries, The Mall, London SW1. Open 10-5 Mon.-Fri.; 10-1 Sat.

23rd-30th August FIFTH PAN-AFRICAN ORNITHOLOGICAL CONGRESS. Lilongwe, Malawi. Details from Len Gillard, Executive Secre-

tary, Fifth Pan-African Ornithological Congress, PO Box 84394, Greenside, Johannesburg 2034, South Africa.

18th October RSPB LONDON DAY AND AGM. Royal Borough of Kensington and Chelsea Town Hall, Hornton Street, off Kensington High Street, London W8 7NX. Full details from Conference Organiser.

24th-26th October SOC ANNUAL CONFERENCE AND AGM. Marine Hotel, North Berwick, East Lothian. Applications to Club Secretary, SOC.

26th-30th October SYMPOSIUM ON ESTIMATING POPULATIONS OF TERRESTRIAL BIRDS. Asilomar Conference Grounds, near Monterey, California, USA. Details from Dr C. J. Ralph & Dr J. M. Scott, Bird Census Symposium, PO Box 43, Hawaii Volcanoes National Park, Hawaii 96718, USA.

November (first or second Saturday) BOU ONE-DAY CONFERENCE. British Museum (Natural History). On 'Vocalisation'.

28th-30th November BTO ANNUAL CONFERENCE. Hayes Conference Centre. Applications to BTO.

News and comment

Peter Conder and Mike Everett

New NNRs Some 220 ha on the famous Ythan Estuary have been added to the existing 718 ha of the Sands of Forvie and Ythan Estuary National Nature Reserve in Aberdeenshire. The reserve includes not only one of the largest and least disturbed dune systems left in Britain but is also important for its breeding Eiders *Somateria mollissima* and Arctic *Sterna paradisaea*, Sandwich *S. sandvicensis* and Little Terns *S. albigrons*. A new reserve has also been declared in Glen Tanar, also Aberdeenshire, where some 3,600 ha of native Caledonian pine forest and open moorland are now protected, along with their associated plant and animal communities. Welcome as such additions always are, we wonder the extent to which further new reserves will stretch the already slender resources which the Nature Conservancy Council has to devote to the proper management of our National Nature Reserves? This year has seen considerable reductions in the funds available, leading to neglect of important management and maintenance on some reserves and serious staffing problems on others: the NCC stall, at the sharp end of

things, had a hard time last summer; we wonder what will happen in 1980?

New dictionary from Hungary We have received an intriguing circular from Hungary describing the new *Septemlingual Dictionary of the Names of European Animals*. It lists some 12,000 scientific species names in alphabetical order, plus 'their equivalents in German, English, French, Hungarian, Spanish and Russian. In each language the reader may find not only the standard name of the animal in question but also its variants, its applied zoological, colloquial, dialectal, obsolete and misapplied or misleading names, as well as the version used in slang, if there is any. The names designating the different developmental stages, sex and seasonal forms of animals are registered too.' It is published by the Hungarian Academy of Sciences in Budapest and is available from Kultura, H-1389, Budapest, POB 149, Hungary, price \$200 or the Sterling equivalent at the time of ordering. It could be very expensive to find out whether it includes 'Lady A's P', 'Spotshank' or 'Gropper'.



255. 'BIRD ILLUSTRATOR OF THE YEAR' Left to right: Crispin Fisher (winner), Robert Gillmor, Laurel Tucker (second), Dr Eric Ennion, Alan F. Johnston (winner of The Richard Richardson Award), Alan Harris (third) and Stanley Cramp (Macmillan Journals Ltd)

'Bird Illustrator of the Year' and 'The Richard Richardson Award' The 1979 awards were presented by Dr Eric Ennion and Robert Gillmor at a press reception in London on 12th September 1979 (see plate 255).

Norwegian reserves We hear that in 1978 the Norwegian Ministry for the Environment created no fewer than 111 reserves, 54 of which are for seabirds and are part of a proposed network of protected breeding areas which will be spaced all along the 50,000 km of Norway's coastline. Even though Norway lagged behind Sweden and Finland at the end of 1978 in terms of the total percentage of its land devoted to wildlife reserves (1.78%, compared with 3.85% and 2.02% respectively), the process is far from finished: more reserves are planned for 1979, including the ornithologically important Hardangervidda National Park in the south. We hope to have further news of these in due course.

New Midlands birdwatching guide Bird-watchers in the northeast Midlands—and indeed visitors to this interesting but perhaps little-known region—will welcome the appearance of a new guide by Roy Frost and David Herringshaw, pleasantly illustrated by Paul Leonard. It is entitled *Birdwatching in the Dukeries and North Nottinghamshire* and is available from Roy at 66 St Lawrence Road, North Wingfield, Derbyshire, or Dave at 61 Butterthwaite Road, Sheffield S5 0AU, price 70p on the doorstep or 90p by post. It is not

an avifauna but a 'where to find birds' guide; Dave tells us that a similar booklet is being prepared for the Sheffield area.

More good titles Our continuing search for original titles of papers and short notes has yielded some more all-time goodies: how about 'Disturbance of coition by Rook', 'Gulls dropping metal objects on glass skylights' and 'Grey Phalarope blowing bubbles', all from this very journal; or a real gem from that doyen of short-note authors, Bernard King, in *Bristol Ornithology*: 'Great Black-backed Gull attacking sleeping man'? *Bird Notes* has included 'Artificial respiration on a drowned Jackdaw' and, from Down Under, *Notornis* has produced 'Golfing gulls'. But this month's star prize should probably go to the *Bulletin of the British Ornithologists' Club* for its 1975 entry, 'The first records of the Mongolian Plover *Charadrius mongolus* Pallas for Mongolia'.

Can you beat this? Our recent comment that we had received little response to this feature has produced a spate of letters. Some of the overseas ones were fairly juicy, including J. G. Bellak's Black Kite, Hobby and Red-footed Falcon all in the glasses at once in the Danube Delta, and David Murray's four woodpeckers (Red-shafted Flicker, Hairy, Nuttall's and White-headed) all in one tree in California, but various people have pointed out that observations of this kind are not too difficult overseas: what about purely British ones? Well, there have been plenty of those

too: A. N. Sykes (a faithful *BB* subscriber since 1940, he tells us) enjoyed Spoonbill, Little Egret and Grey Heron in his glasses at once at Marazion Marsh, and David Christie, 'somewhere in southern England', once contrived to have the following binocular-full: a Buzzard, a Honey Buzzard, two Hobbies—one of them mobbing a Sparrowhawk—and a Kestrel. PC recalls a Golden Eagle, two Buzzards and two Ospreys together over Loch Garten and also a good one for the Pembrokeshire coast in 1947, when G. H. J. Fursdon listened to a singing Nightingale (rare in those parts) and Manx Shearwaters at the same time. Terry Walsh really takes some beating: he almost makes a profession out of cramming as many birds as

possible into his binocs, it seems, and has had Whooper Swan and White-winged Black Tern at Cley; Bobolink and Red-headed Bunting on the Out Skerries; Pied-billed Grebe and Ferruginous Duck at the Loch of Strathbeg; and Laughing and Iceland Gulls at St Ives. He even admits to having had to crouch in pig manure to achieve Sharp-tailed, Buff-breasted and Curlew Sands, four Little Stints and a few Dunlins... Nicest of all, though, was a postcard from John Holloway saying that, from his bed, and without binoculars, he had had Wheatear, Wryneck and Red-backed Shrike all at once, which seemed quite good, until we looked at the postmark: it was Fair Isle. This correspondence is now closed, unless...

Opinions expressed in this feature are not necessarily those of the editors of British Birds

Recent reports

R. A. Hume and K. Allsopp

These are largely unchecked reports, not authenticated records

This report covers September, with several August and early October records; except where otherwise stated, dates refer to September.

High pressure regions persisted for most of the month to the south and east, blocking the movements of the Atlantic depressions which became slow-moving and produced persistent westerlies across the country. For two periods, from 5th to 8th and from 28th into October, eastern areas were influenced by anticyclones over Europe and southeasterly winds brought an influx of many migrants. Between these periods, from 17th to 20th, the pressure dropped and two deep depressions brought very strong westerly winds, clearly reflected in the seabird records.

Seabirds, gulls and terns

An unexpected find was a **White-billed Diver** *Gavia adamsii* off Rhum (Highland) on 10th August. **Red-necked Grebes** *Podiceps grisegena* appeared in very small numbers off the British east coast, apart from seven flying south past Flamborough Head (Humbeside) on 29th. Perhaps the ultimate seawatch bird is an **albatross** *Diomedea*: a fine **Black-browed** *D. melanophris* was seen off the Kyle of Tongue (Highland) on 11th August and

unidentified individuals passed Spurn (Humbeside) on 23rd (two sightings) and Holme (Norfolk) on 25th. **Sooty Shearwaters** *Puffinus griseus* were very evident, with large numbers off Cape Clear (Cork) and eastern Irish localities during the month, 350 off Fair Isle (Shetland) on 8th, 300 at Malin Head (Donegal) and 100 at Portrush (Antrim) on 20th, and big flocks off Flamborough and St Ives (Cornwall) about 22nd and 23rd. At Filey Brigg (North Yorkshire), 33 on 15th and 68 on 22nd flew north. A single **Cory's Shearwater** *Calonectris diomedea* appeared off Bardsey (Gwynedd) on 23rd August and another at Filey on 14th. Single **Little Shearwaters** *P. assimilis* were seen in the Firth of Forth (Fife/Lothian) on 26th August and off Flamborough on 30th. **Leach's Petrels** *Oceanodroma leucorhoa* were again affected by gales, with movements off Merseyside almost matching those of a year ago. Up to 400 in a day were reported between 16th and 21st. Many passed St Ives in the same period, with seven off the Calf of Man (Isle of Man) on 20th, 186 at Portrush on the same day and three off Shellness (Kent) on 22nd, when one was seen at Cley (Norfolk); nine passed Spurn on 23rd. Two had earlier been seen off Ayr (Strathclyde) on

13th. Singles turned up at several inland localities, including Blithfield Reservoir (Staffordshire) on 20th and Grafham Water (Cambridgeshire) on 24th. Much earlier, a **Fulmar** *Fulmarus glacialis* occurred far inland at Eye Brook (Leicestershire) on 9th August, then another near Blackburn (Lancashire) on 21st. **Arctic Skuas** *Stercorarius parasiticus* passed seawatching stations in good numbers in late August and in the rough weather of late September, with 112 off Hope's Nose (Devon) on 25th August, 130 off Shellness on 26th August and 150 passing south off Filey Brigg on 27th August. In September, there were 52 at Filey on 15th, 28 at Dungeness (Kent) on 22nd and 40 at Shellness on the same day. Totals of 88 **Great Skuas** *S. skua* and 12 **Pomarinés** *S. pomarinus* were also noted at Shellness on that date. Single **Pomarinés** were seen at Dungeness on 6th and 22nd, with two off Filey on 15th, three off Ramore Head (Antrim) on 20th and one at Flamborough on 23rd, and an inland **Great Skua** was at Wossbro Reservoir (South Yorkshire) on 1st. **Long-tailed Skuas** *S. longicaudus* were sparse, with singles at Hartlepool (Cleveland) on 26th and 27th, Flamborough on 26th and 30th and Cley on 26th. **Sabine's Gulls** *Larus sabini* occurred at Cley on 8th August, in the Thames Estuary (Essex) on 13th August and on Tees-side (Cleveland) and in the Forth on 26th August, then at Filey Brigg on 1st, Ballycotton (Cork) on 2nd, Fair Isle on 16th, Ramore Head on 20th and another on 21st, Winterton (Norfolk) and Dungeness on 22nd and three at Shellness on 23rd. As usual, St Ives had the lion's share, with singles on 2nd and 14th August and up to six during the late September movements.

Mediterranean Gulls *L. melanocephalus* remained in ones and twos on the Kent coast. Five were identified at Leigh-on-Sea (Essex) between 8th and 20th August and, inland, singles were seen at Durleigh (Somerset) on 18th August and Blithfield on 31st August. One at Ballyheigue (Kerry) on 25th August was one of several in eastern and southern Ireland. One more occurred at Morston (Norfolk) on 2nd. Up to 90 **Little Gulls** *L. minutus* roosted at Castle Eden Denemouth (Durham) during August, and 14 at Blithfield was a large party for the area, but numbers at Dungeness dwarfed these: 232 passed west on 18th, 237 on 19th, 225 on 20th and 129 on 25th.

A **Whiskered Tern** *Chlidonias hybridus* attracted much attention at Grafham



between 9th and 24th. After some initial concern over access, relations between birders and the local sailing club became so good that people were given free boat rides to get closer views of the bird. Further **White-winged Black Terns** *C. leucopterus* occurred at Pennington (Hampshire) on 25th August and Abberton (Essex) on 31st August, Pitsford (Northampton) on 13th, Chew Valley (Avon)—two on 9th—and at Sizewell (Suffolk) for a lengthy period in mid-month. **Gull-billed Terns** *Gelochelidon nilotica* were reported at Burnham Overy (Norfolk) on 1st and Thurlestone (Devon) on 5th.

Herons, wildfowl and birds of prey

A **Night Heron** *Nycticorax nycticorax* added variety at Flamborough on 23rd and 24th. The Stour Valley (Kent) **Glossy Ibis** *Plegadis falcinellus* remained throughout August and a **Spoonbill** *Platalea leucorodia* appeared at Bough Beech Reservoir (Kent) on 27th August. A **Crane** *Grus grus* made a lengthy stay at Southwold (Suffolk) in mid-month and another was seen at Spurn on 11th. **Ruddy Shelducks** *Tadorna ferruginea* may or may not be occurring in Britain as wild birds. One at Drakelow (Derbyshire) and Bodymoor Heath (Warwickshire) on 15th August may seem suspect, but was one at Steart (Somerset) from 18th to 21st August any better? **Shelducks** *T. tadorna* reached 1,400 there on 2nd. A **Blue-winged Teal** *Anas discors* was found on the Hayle (Cornwall) between 6th and 14th August and another at Stithians Reservoir (Cornwall) in September. A **Ferruginous Duck** *Aythya nyroca* turned up on the Calf of Man on 8th. On 31st August, a **Montagu's Harrier** *Circus pygargus* appeared at Portland (Dorset), while **Marsh Harriers** *C. aeruginosus* inland included singles at Thrapston (Northamp-

ton) on 10th August and Belvide (Staffordshire) between 18th and 28th August. One at Ballycotton on 17th August was followed by another there two days later. A **Red Kite** *Milvus milvus* was seen in Cornwall from 13th. Portland produced a male **Red-footed Falcon** *Falco vespertinus* on 30th. Far more interest—and argument—was generated by an immature male **Lesser Kestrel** *F. naumanni* at Black Rock (Cornwall) from 16th onwards, and another was reported from Sandwich (Kent) on 30th.

Waders

A **Dotterel** *Charadrius morinellus* at Blakeney on 30th August was followed by two at Porthgwarra on 1st, one at Lundy (Devon) on 4th and singles on Fair Isle on 5th and 20th. **Curlew Sandpipers** *Calidris ferruginea* were sparse inland, except for 19 at Eye Brook on 30th August, but numbers on the British east and south coasts were more substantial, with 26 at Cley on 2nd and 50 there and 15 on the Hayle on 9th. All other notable waders were of American origin, with **Pectoral Sandpipers** *C. melanotos* coming back into their own this year. After the five detailed last month and one on the Ribble (Lancashire) from 13th to 15th August, another 26 arrived between 10th and 1st

October, several staying for some time. Records came from Spurn (three), four more from Tacumshin (Wexford), Lough Beg and Castle Rock (Derry), Swords Estuary (Dublin), Lade (two) and Pett Level (both Kent), Killingholme (Humberside), Wath lngs (North Yorkshire), Dungeness, Cley, Holkham (Norfolk), Drift and Stithians Reservoirs (Cornwall), Minsmere (Suffolk), Cape Clear Island, Fair Isle, Chesterfield (Derbyshire) and two at Perry Oaks (London). **Wilson's Phalaropes** *Phalaropus tricolor* were next in abundance. After six detailed last month, another nine occurred. In late August, one was seen on the Ouse Washes (Cambridge), two at Wisbech (Norfolk) and one at Clonakilty (Cork). One stayed at Swords from 1st to 4th, one at Holme from 15th to 20th, and one at Tacumshin on 15th was followed by a second on 16th. Finally, one made a very brief appearance at Chew on 20th. Except for one at Strangford Lough (Down) early in the month, **dowitchers** *Limnodromus* appeared later: one at Tacumshin on 20th, two passing Spurn on 22nd and singles at Abberton (plate 256), on the Hayle and at Frodsham (Cheshire) on 29th. The latter bird was a **Long-billed** *L. scolopaceus* and stayed on several days. Another remained at Minsmere

256. Long-billed Dowitcher *Limnodromus scolopaceus* (and Mallard *Anas platyrhynchos*), Essex, September 1979 (Jeff Puk)



from 30th October. An **Upland Sandpiper** *Bartramia longicauda* was reported from Scilly in mid-month and, more expected, a **Lesser Golden Plover** *Pluvialis dominica* was there at the end of the month. **Buff-breasted Sandpipers** *Tryngites subruficollis* appeared on Scilly, at Ballycotton on 14th, Stithians on 15th and Tacumshin from 16th, with two there on 19th, and Lady's Island Lake and North Slob (both Wexford) on 19th. Stithians also produced a **Solitary Sandpiper** *Tringa solitaria* from 15th to 19th, during a really purple patch in Cornwall. After one at Ashworth Moor (Greater Manchester) on 10th August, two **Spotted Sandpipers** *Actitis macularia* were in Scilly at the end of the month. **Baird's Sandpipers** *C. bairdii* were seen at Akeragh Lough (Kerry) on 31st August, Ballycotton from 9th to at least 15th (plate 257), Killingholme from



257. Baird's Sandpiper *Calidris bairdii*, Co. Cork, September 1979 (Anthony McGeehan)

18th to 20th, Tacumshin on 22nd and Arnside (Lancashire) from 25th to 30th. Blithfield Reservoir is unsurpassed in the Midlands for numbers of regular waders; at last it produced a rare one for its loyal observers, in the shape of a **Lesser Yellowlegs** *T. flavipes*, which stayed for a week or two from 16th. Finally in this excellent harvest of Nearctic waders, a **Greater Yellowlegs** *T. melanoleuca* appeared on Lough Beg on 8th.

Near-passerine and passerine migrants

An **Alpine Swift** *Apus melba* added to the extraordinary list at Tacumshin on 30th. Several **Hoopoes** *Upupa epops* included one in Co. Tipperary on 20th August, one at Ballycotton on 14th and one at the Lizard (Cornwall) on 8th and 23rd. After a **Great Spotted Cuckoo** *Clamator glandarius* near St Just (Cornwall) on 8th, a Nearctic **Yellow-billed Cuckoo** *Coccyzus americanus* gave scores of observers a tick at Portland between 24th and 28th, when it was attacked by a Kestrel *F. tinnunculus*. **Wrynecks** *Jynx torquilla* occurred inland at Bushby (Leicestershire) on 27th August, Mansfield (Nottingham)

next day and Reading (Berkshire) about the same time. Coastal ones were on Lundy on 26th August and 21st, Porthgwarra on 1st, Fair Isle on 1st (the only one), Cape Clear and Dursey Islands (Cork) in early October and St Abbs (Borders) on 2nd October. **Red-backed Shrikes** *Lanius collurio* were reported at Dungeness on 1st (two), Saltee (Wexford) and Cape Clear Island on 2nd, on Calf of Man from 3rd to 14th, on Fair Isle on 8th, at Spurn up to 11th, at Sizewell (up to four) until 9th, at Wells (Norfolk) on 8th and on Lundy on 3rd, 5th and 28th. Two **Great Greys** *L. excubitor* arrived at Spurn on 30th. **Woodchat Shrikes** *L. senator* were found at Hook Head (Wexford) on 25th August, on Lundy from 5th to 9th and in Scilly at the end of the month. Lundy also produced a **Short-toed Lark** *Calandrella brachydactyla* on 28th and singles were seen on Fair Isle on 9th and on Cape Clear and Dursey Islands in early October. A **Tawny Pipit** *Anthus campestris* remained at Sizewell until mid-month and others were seen at Helston (Cornwall) on 5th and the Lizard, Marazion and Porthgwarra (all Cornwall) on 15th and 16th. Single **Richard's Pipits** *A. novaeseelandiae* appeared at Flamborough on 23rd and Akeragh Lough on 27th, followed by four at Donna Nook (Lincolnshire) on 29th and 30th, one at Weybourne (Norfolk) on 29th and four on Fair Isle on 2nd October, when there was also a **Citrine Wagtail** *Motacilla citreola* there. A **Thrush Nightingale** *Luscinia luscinia* in Scilly on 30th was an exceptional record. Only two **Bluethroats** *L. svecica* were reported, at Newquay (Cornwall) on 23rd and at Blakeney on 27th. A **Moustached Warbler** *Acrocephalus melanopogon* at Angmering (West Sussex) on 18th August was a most exciting find. The more usual **Aquatic Warblers** *A. paludicola* were seen at Marazion (up to four until 16th), the Lizard and Portland on 30th. One **Lanceolated Warbler** *Locustella lanceolata* was trapped on Fair Isle on 20th. **Icterine Warblers** *Hippolais icterina* were found at Chilham (Kent) on 25th August, Cape Clear Island on 29th August, with four there about 9th and one on 1st October, Hartlepool on 18th to 19th August, on the Lizard on 4th (two) and 16th, at Sandwich and Dungeness on a few dates between 1st and 23rd and at Filey Brigg on 1st, Wells on 2nd, Calf of Man on 3rd and Bardsey on 29th. Typically, **Melodious Warblers** *H. polyglotta* were even more southwesterly: on Lundy on 30th August and 5th, Portland on 2nd (three), Saltee on 2nd (two), Prawle Point (Devon)

on 3rd, Dungeness on 4th, Porthgwarra at the end of August and on 16th, Lydd (Kent) on 9th and Nanquidno (Cornwall) on 15th. **Barred Warblers** *Sylvia nisoria* occurred on the Naze (Essex) on 26th August, at Porthgwarra on 1st (two), Prawle Point on 3rd, Fair Isle (up to five) from 8th, and Portland on 30th (two), with another on 2nd October. A **Subalpine Warbler** *S. cantillans* turned up on Cape Clear Island on 25th. On 2nd, a **Bonelli's Warbler** *Phylloscopus bonelli* was found at Rye (East Sussex) and **Yellow-browed Warblers** *P. inornatus* came in on cue at Flamborough on 24th to 26th, Fair Isle on 24th (two) and 30th (three), Wells on 30th, Redcar (Cleveland) and St Abbs, where there were no fewer than six on 2nd October. An **Arctic Warbler** *P. borealis* was seen on Fair Isle from 30th and another at Hartlepool on 4th October. A **Red-breasted Flycatcher** *Ficedula parva* was at Nanquidno on 15th, followed by one at Porthgwarra on 29th and two there on 30th. Holkham produced one on 1st October and there was another in Great Yarmouth about that date. **Firecrests** *Regulus ignicapillus* came in at Holkham, Blakeney, Spurn and Porthgwarra (20) on 30th, but Dungeness had a slightly earlier series: 10 on 16th, 15 on 29th and 27 on 30th.



Reviews

The Orbis Encyclopedia of Birds of Britain and Europe. Edited by **John Gooders.** Rizzoli Editore, Milan, 1971, and Orbis Publishing Ltd, 1978. Five volumes, first and last sent for review; hundreds of colour photographs, illustrations, maps, species accounts and general essays. £37.50 (£7.50 per volume)

Hopefully, this will be the final regurgitation of a well conceived but imperfectly executed attempt to cross a field guide with a literary handbook and so breed an ornithological encyclopedia. It has already appeared in 65 weekly instalments (and, in my area, these are on the stands again). Presumably, thousands of people have bought it, but the arrival of a hardback version should not be taken as an ultimate triumph in ornithological publishing. My reactions to the weekly instalments were, in sequence, real interest, growing frustration, some

The bushes must have seemed full of head-stripes and wingbars! Four were on Bardsey on 29th and 30th, and up to seven were seen on Cape Clear Island.

There was a **Serín** *Serinus serinus* at Galley Head (Cork) on 3rd October. A **Two-barred Crossbill** *Loxia leucoptera* was claimed at Thirlmere (Cumbria) on 10th August. **Scarlet Rosefinches** *Carpodacus erythrínus* appeared on Fair Isle, with one or two on seven dates, at Hauxley (Northumberland) on 25th August, on Bardsey from 18th to 20th and 29th and on Lundy from 24th to 27th. **Yellow-breasted Buntings** *Emberiza aureola* were seen on Fair Isle on 9th and 29th to 30th (two) and **Ortolan Buntings** *E. hortulana* occurred at Holme on 24th and 27th August, on Lundy on 30th August, on Cape Clear Island and at Portland on 2nd, at Dungeness on 30th and on Dursey Island on 4th October. **Snow Buntings** *Plectrophenax nivalis* began to appear at Filey Brigg from 9th and in Norfolk from 15th, and **Lapland Buntings** *Calcaríus lapponicus* on Scilly from 8th, on Lundy and at Clew (up to eight) from 20th and at a few other localities by the end of the month. A **Little Bunting** *E. pusilla* occurred at Filey Brigg on 30th, with another on Holy Island (Northumberland) and two at St Abbs in early October.

Latest news

In early November: male **Barrow's Goldeneye** *Bucephala islandica* at Irvine (Strathclyde); **Killdeer** *Charadrius vociferus* and **Olive-backed** *Anthus hodgsoni* and three **Richard's Pipits** in Scilly. In second half of October: Britain's third ever **Isabelline Wheatear** *Oenanthe isabellina* at Aberdeen (Grampian), **Pied Wheatear** *O. pleschanka* at Boulmer (Northumberland), **Desert Warbler** *Sylvia nana* at Great Meols (Merseyside) and four **Swainson's Thrushes** *Catharus ustulatus*, two in Scilly and two in Cornwall.

anger and, finally, partial revenge. Looking now at two review volumes, I feel the same all over again, but they are too strong for my scissors.

The good parts are the colour photographs, which make up an excellent reference series and include some seldom photographed subjects, the colour plates of birds in flight by the increasingly influential Peter Hayman, and most of the essays that space out the species texts and deal with topics as wide-ranging as evolution, hybridisation and falconry. The bad parts—unfortunately in the majority—are the lurid illustrations and the truncated or vacuous texts purporting to describe every species on the European list. Both fail consistently to pass the tests that must now be put in view of the modern standards in field identification and other disciplines.

I could relent and say that the 'ordinary birdwatcher' will be well enough served by this superficially handsome offering. If I do, however, I shall only compound the conceit of *Orbis* and Mr Gooders. The latter can serve birdwatchers well, but, when making the claim that this originally Italian hotchpotch is 'the most comprehensive work so far published on the birds of Europe', he must have been joking. *Caveat emptor!*

D. I. M. WALLACE

The Birdlife of Britain. By Peter Hayman and Philip Burton. Mitchell Beazley, London, 1979. 260 pages; many colour illustrations. £8.95.

The Mitchell Beazley Birdwatcher's Pocket Guide. By Peter Hayman. Mitchell Beazley, London, 1979. 192 pages; many colour illustrations. £3.95.

These two Mitchell Beazley volumes are both produced in association with the RSPB. They differ vastly in size (21×29 cm and 9.5×19.5 cm), but have a lot in common. The illustrations are, for instance, often nearly identical (sometimes reversed left to right, sometimes with minor posture changes, but frequently almost indistinguishable). Naturally, there are more illustrations in the larger book, but the principle is the same in both: these are not field guides with merely one or two small side-view illustrations of each species, but are profusely illustrated with numerous drawings showing typical postures, head-on views, display attitudes, nestlings, both sexes, flight patterns and so on. With the huge number of drawings which this involves, there must always be some which are more successful than others, but, on the whole, Peter Hayman's portrayals are first-rate. Colour-reproduction is rather better in the large book than in the small one, but the latter is surprisingly successful, presenting a great deal of information in a format which is truly—for once—pocket-sized.

It does seem a pity, however, that publishers seem to think that popular guides to birds must depart from a 'natural' classification system, such as those of Wetmore or Voous. I fail, for instance, to see any reason for inserting Gannet, Cormorant and Shag between Puffin and the other auks. There are other features which will doubtless annoy experienced birdwatchers, such as the inclusion of a small selection of strictly Continental species in a book entitled *The Birdlife of Britain* (e.g. Grey-headed and Black Woodpeckers), when some relatively common British species could have been given extra space. The more similar that birds are, the more need is there for identification details; why, then, are Marsh Tit and Willow Tit, Twite and Linnet, and Willow Warbler and Chiffchaff each crammed on to single pages, whereas those familiar 'British' birds Crested Lark and Rock Bunting merit full pages to themselves? Even more stupidly, Icterine Warbler and Melodious Warbler are each given a full page. Such anomalies are fewer in the pocket-guide version. This smaller book is, in many ways, the better value for money, despite the lack of Dr Philip Burton's generalised texts and John Parslow's distribution maps (both of which are found only in the larger book).

The preceding paragraphs have been critical of certain aspects of these books, perhaps mostly those brought about by the publisher's demands rather than the authors'/artists' desires. Despite the imperfections of species-choice and layout, these books both contain voluminous quantities of very valuable identification information, presented in a highly original and attractive fashion. Although—I suppose—they were designed for the beginner or novice birdwatcher, I suspect that every single birdwatcher in Britain—even the most expert—would find many valuable identification points in Peter Hayman's paintings and their useful, short captions. One or other of these two books ought to be on every birdwatcher's bookshelves.

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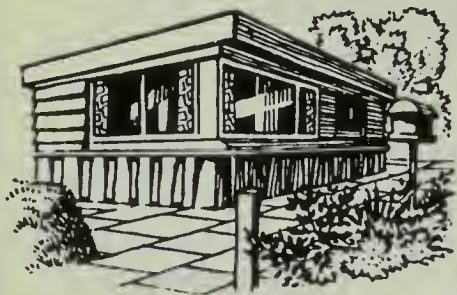
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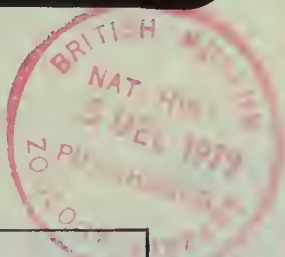
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Front cover: Grey Heron (*Robert Gifford*).



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